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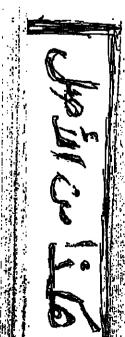
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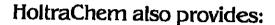
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Finland Eyes Export Chemical Trade

Sales of Finnish chemical companies operating sales of Financial Control of the Sales of Financial Sales of Financia abroad 1056 to all dwell exceed \$1.6 billion as some major acquisitions complete their first full year of operation under Finnish management, according to Raili Nuortila, managing director of Finland's Chemical Industry Federation.

Speaking before a panel session on the international-speaking of Finland's chemical industry, during a three-day meeting of the Finnish Chemical Congress in cay meeting. Helsinki, Mrs. Nuortila noted that the current figures are in sharp contrast to the total of little more than \$110 million in turnover of Finnish-owned chemical companies operating abroad only five years ago.

Rehlad the sharp increases are important acquisitions during the past two years by the major stateowned groups, Kemira and Neste, but also the growing

realization on the part of Finnish chemical companies across the board that international markets are likely to be their only basis for sustained, profitable growth, given the small and highly competitive domestic mar-

Mrs. Nuortila says the estimated 24 percent share of chemical companies in turnover abroad last year represents an increase from 17 percent in 1984, the last year for which official statistics are available, and compares with 32 percent of the total garnered by the metal and engineering industries and 30 percent by the forest products industries in that year.

For the future, she sees a continued trend toward

Continued on Page 16

KEMIRA RESEARCH: Kemira Oy pilot plant at the company's Espoo research center near Helsinki develops experimental data for both organic and inorganic processes.



### Standard Oil Chemical Signs Chemical For Butanediol Know-How

Carbide Sells Agricultural Unit

Rhone-Poulenc, the French-based incurred in fending off GAF's unsolicited ten-

To Rhone-Poulenc for Cash

production of 1,4-butanediol, gammabutyrolactone and tetrahydrofuran from maleic anhydride.

Davy's new low-pressure ester hydrogenation process, derived from earlier collaboration with Union Carbide Corporation, would we a malelc anhydride feedstock produced by Standard Oil's proprietary fluid-bed normai butane oxidation technology and the aqueous recovery and purification technology of UCB of Belgium.

provide significant cost savings in producing the chemicals, including more efficient energy use, byproduct utilization, waste resiment and materials handling, according to Douglas Campbell, Standard Oil Chemical

Process integration, optimization studies and engineering are underway at Davy's anhydride capacity of about 200 million

ever, the process is extremely flexible, he

Worldwide chemical giant with sales of der offer.

8 billion has reached an agreement to

acquire, through its US affiliate Rhone-

his acquisition includes the worldwide

A's been estimated that the business being

quired by Rhone-Poulenc earns around \$40 nillion a year, although a shutdown at Insti-

the earlier this year probably reduced that,

tarbide closed the plant there for a period to

nake repairs, following an OSHA inspection that found delicloncies and resulted in a fine.

It's expected that the company will use the proceeds of the sale to reduce the big debt it

Standard Oil Chemical Company has Matthey. That technology is still very much signed an exclusive agreement to obtain technology from Davy Corporation for alcohol plants in Poland and the Peoples reduction of 1.4-butanedial, gammathat have been built around the world.

Carbide said last December that it would enter the butanediol market using maleic anhydride technology, but planned to purchase its maleic feedstock.

Trade consensus has been that such a project would not fly, since it is maintained that MA has to be part of the product integration, both from an economic and process balance standpoint.

A Carbide spokesman said last week that integration of the technologies is expected the company "has no plans to enter the (butanediol) market at present." Further the company recently signed a long-term acetylene supply agreement with GAF Corporation. GAF, along with E. I. du Pont de Nemours & Co. and BASF Corporation, are the current domestic producers of butane-

While admitting that the maleic anhydride Likeland, Fla., and London, UK, offices. The technology "looks interesting," BASF for one proposed Standard Oll integrated facility, to be built by Davy, would have annual maleic main the most attractive route well into the next decade.

pounds annually.

A spokesman says that as a long-term goal it's anticipated approximately 40 to 50 percent of the maleic would go directly to the maleic market and 50 to 60 percent into promaleic chemistry to remain the lowest cost route.

Standard Oil Chemical's Campbell says The Davy process is an offshoot of the lowpressure oxo alcohols process developed by Davy with Union Carbide and Johnson Continued on Page 45

The acquisition of Carbide's agricultural

"Over the last six years we've made a com-

mitment to growth in the US. First with the

1981 acquisition of Mobil Chemical Com-

pany's agrochemical business. More recently

by our new product introductions and market

Continued on Page 14

operation by Rhone-Poulenc fits in with a

it will acquire Celanese.

and plant improvement industry.'

compared to 1984.

containing liquid laundry detergents, which followed heavy advertising and promotional campaigns on the part of retailers. "Detergent producers were literally giving it away," observes Jim Huggins, product manager at Monsanto Company.

"This year, though," according to Mike DeCola, phosphorus product manager at FMC Corporation, "powders are getting the attention." Mr. DeCola believes 1986 STPP onsumption will actually be up by 5,000 to 6,000 tons over last year.

trend of European companies acquiring US chemical businesses. A recent major example of this was Hoechst's announcement that Observers say the current powder atten-According to Thomas M. Dille, group vice-According to Thomas values the worldwide sarch facilities. The closing is scheduled for this way.

According to Thomas values agricultural president for Rhone-Poulenc agricultural sector. "This acquisition reflects a key sector, "This acquisition of the RP Group to enstrategic objective of the RP Group to enhance its position in the US crop protection

In addition, new product introductions on The company, which has a policy of not function "is indeed a profitable business with through addition of proven insecticides and through addition of prov

Also, producers say that in phosphate-al-lowed areas, branded products with higher

# Marketing Rep@rter

### **Sodium Tripoly Gets Boost from Powders**

Sodium tripolyphosphate makers are Tide" which is currently in its second phase of the belief that the product's steep de- of marketing in Florida. The product feamand decline of the past five years has tures a built-in organic perborate bleach. ended. In fact, this year's consumption is so far exceeding last year's. Few are optimistic enough, however, to expect any demand increases through the balance of the decade and many would not be surprised by a slight decline.

This year's healthy consumption levels are welcomed by producers, who were forced to decrease production by 10 percent in 1985 as

The 1985 decline came mostly as a result the significant growth of non-phosphate

Also affecting consumption last year was preparation for late-1985 phosphate detergent bans in Maryland and Washington, D.C., and the reformulation of some dishwasher soaps, especially "Cascade", with reduced

tion has its roots in last year's slow but steady introduction of "Surf" home laundry detergent by Lever Brothers. Now, the advertising emphasis for other detergent makers such as cter & Gamble and Colgate is also said to be turning more toward powder lines.

the powder front may prove to boost tripoly consumption. Notable detergents now being test marketed are P&G's "Tide Multi-Action Sheets", Clorox's "Act", and a new "Wisk" powder from Lever Brothers.

plant growth regulators will help balance Rhone-Poulenc Agrochimle's strength in her-

Any success for the product would likely be a wash for STPP, however. Mr, DeCola at FMC notes that "New Science Tide's" phosphate content is lower than traditional "Tide's" by about 6 percent, but that acceptance by consumers would likely be at the expense of some non-phosphate liquids mar-

All in all, however, this year's rally may be, as one producer put it, "something of a blip in the overall picture." Even with the powder advertising activity, liquid laundry detergent encroachment has continued in 1986, albeit at a slower pace. One producer says the liquid share of the detergent market Continued on Page 43



phosphate content have been taking market ahare from lower strength generics.

Making the most commotion in the detergent world these days. 'New Science Tide' is currently in its second phase of marketing in Florids.

CHEMICAL MARKETING REPORTER November 17, 1986

### **Water Act Veto Drawing Fire** Of Lawmakers, Environmentalists

Critics say President Reagan "is turning his back on all Americans" by vetoing an \$18 billion plan to curb pollution of the nation's waterways, and the new Democraticled Congress plans to send similar legislation back to the White House soon after it convenes in January. President Reagan vetoed the Clean Water Act amendments on grounds they were too costly, just hours before a November 6 midnight deadline for action on the bill and comfortably after the 1986 elections.

"Unfortunately, this bill so far exceeds acceptable levels of intended budgetary com-mitments that I must withhold my approval," President Reagan said in his veto

Lawmakers and environmentalists, who had urged him in a series of news conferences to sign the legislation, responded immedi-

ately.
"By refusing to sign this enormously popular environmental health bill, Reagan is turning his back on all Americans," said Michael McCloskey, chairman of the Sierra Club. "It seems that the President considers saving dollars more important than saving lives."

"It is astounding that the President would veto legislation that is at the top of the public's agenda," added Sharon Newsome, director of legislative affairs for the National Wildlife Federation. "Now all Americans vill have to wait for cleaner water."

Consumer advocate Ralph Nader said President Reagan "has broken faith with the American people not only by vetoing the clean water bill but by waiting until just after the election so the American people would not have a chance to register their judgement at the polls."

Both the Democratic-led House and the Republican-led Senate had voted unani-Continued on Page 28

### **Halcon Signs Pact** With Nobel Affiliate

Nobel Chematur AB, Karlskoga Sweden has signed an agreement with the Halcon SD Group, for exclusive worldwide right to li-cense Halcon's ethylene-from-ethanol tech-

Under the arrangement, Nobel Chematur will assume responsibility for marketing, but will be fully supported by Halcon SD while assimilating the technology.

Halcon's subsidiary Halcon Catalyst In-

dustries will continue to market and manufacture its proprietary "SymDol" catalyst utilized in the process. Halcon will retain the exclusive rights to license technology for the production of ethylene oxides and ethylene glycols from ethanol.

Nobel Chematur, a company in the group Nobel Industries Sweden, is engaged in chemical engineering and supply of plants and technologies for ethanol and ethanol BioTechnica R&D derivatives, explosives, pharmaceuticals and environmental protection.

### EPA Cancels Carbon Tet

Environmental Protection Agency has issued a notice canceling all pesticide products containing carbon tetrachloride, with the exception of a single registration for use on encased museum specimens.

Carbon telrachloride is currently registered in a number of products used as fumigants to control insects in stored grain, in flour milling and grain processing plants, as well as museum specimens.

EPA says its action is based on evidence that carbon tet poses cancer risks and adverse effects to the central nervous system, liver and kidneys.

The registration, sale and of the pesticide for grain fumigation has been suspended since December 31, 1985. Leftover stocks were used until last July. Carbon tet has been on the market since

From 1981 through 1984, 23.8 to 27.7 million pounds of the chemical were used on approximately 745 million to 870 million bushels of stored grain on and off the farm, according to the agency.

### **Accord on Wastes**

The US and Mexico say they have reached an agreement on the trans-boundry movement of hazardous waste and toxic substances. The bilateral pact provides for notification and, in the case of hazardous waste. prior written consent from a receiving nation to a proposed export, and for cooperation in returning improperly shipped materials.

According to the agreement signed last week by Environmental Protection Agency administrator Lee Thomas and Mexican secretary of urban development and ecology Manuel Camacho-Solis, the two nations pledged to begin formal negotiations on a strategy to control air pollution caused by copper smelters on both sides of the border.

The environmental chiefs also discussed Mexico's progress in resolving water pollution problems in the San Diego-Tijuana border area and in the New River.

Both sides reaffirmed commitment to the principles outlined in the Presidential Border Environmental Agreement of 1983.

### Airco Set to Open **Air Separation Plant**

A new 1,000-ton-per-day gas liquefaction unit, the largest of its kind ever built in the US, goes on stream December 31, 1986 when Airco opens its new Springville, Ind., air separation facility.

Located mid-way between Chicago and South Bend, the plant will supply liquid nitrogen, liquid oxygen and liquid argon to the chemical, heat treating, steel, food, and plastics industries in the four-state area surrounding the facility.

To ensure a reliable supply of high-quality product, Airco installed a storage system capable of holding a ten day supply of liquid

The new plant incorporates the latest technology for automated loading, product analysis and poliution control. Airco's proprietary "Sentry System" measures gas purity to within 0.1 part per million and automatically fills trailers to the legal load limit.

### **To Be Continued**

BioTechnica International, Inc. reported it received notice from EniChem Agricoltura S.p.A. that Italian firm will terminate its collaborative research agreement to geneti-cally engineer *Rhizobia* bacteria for use as soybean seed inocula. After EniChem's funding of the research project ends in April 1987, BioTechnica plans to continue the project although the Company may seek funding from a new corporate collaborator.

Norman A. Jacobs, BioTechnica's president and chief operating officer says, "Bio-Technica initiated this research program in 1983, and the technology rights will remain with BioTechnica. We have developed improved Rhizobia strains which show promising greenhouse results, and the company plans to apply for approval to conduct initial field tests in 1987 to corroborate these data. gh the less of this contract may adversely impact our 1987 revenue, BioTechnica has regained commercial rights to a key project in our agricultural biotechnology

Mr. Jacobs added, "EniChem took over this research program from Univoyal, Inc. in April 1986, during the period when it was considering the purchase of the Uniroyal agrichemical business. EniChem subsequently decided not to make an offer for the Uniroyal business.



Steven W. Schaefer, who has been appointed executive vice-president for plastics and polymers by Occidental Chemical Corporation. The company says the appointment reflects his increased responsibilities following the acquisition of Tenneco Polymers, Inc.

### **Industrial Gas Firms** Are Acquired by UGI

UGI Corp., says that its AmeriGas subsidiary has acquired related industrial gases distributors, based in Oakland, Calif., for an undisclosed amount of cash.

AmeriGas purchased the assets of closely held Pacific Oxygen Co. and Pacific Oxygen Sales Co. whose combined annual sales are approximately \$5.4 million.

The two companies distribute oxygen, nitrogen, argon and other industrial gases, as well as welding supplies, from Oakland, San Leandro, San Francisco and City of Industry Los Angeles).

Edwin A. Wilcox, vice-president of UGI and president of AmeriGas Industrial Gases, said the acquisitions will "strengthen existing AmeriGas markets in California and provide a base load for our new air separaion plant that is being built in Sacramento."

Mr. Wilcox said operations of the firms will be merged into the Pacific Region of the AmeriGas Industrial Gases Division, which has 26 distribution locations in California.

### Bioassay to Sell **Toxicology Labs**

Bloassay Systems Corporation says it will sell its toxicology facility in Woburn, Mass. to US Biogenetics, Inc. US Biogenetics will pay \$250,000 for Bioassay's interest in its lease and for certain laboratory equipment at Woburn, Bloassay will retain all other financial assets and liabilities related to the Woburn operation.

The company also expects to sell its toxicology facility in Decatur, Ill. by mid-December to a separate purchaser. The sales would be subject to shareholder approval. Bloassay, which has been considering redeployment of its assets since the beginning of 1986, says "unfavorable climate in the toxicology market" led to fewer studies being placed with its operating subsidiaries and losses in the business.

The company has also agreed to sell its interest in IRE-Medgeniz SA, a joint venture established in 1985 to market and sell diagnostic products in Europe.

### **S&W Gets Contract** For Ethylene Unit

Stone & Webster Engineering Corporation will supply technology and basic engineering and design services for the 450,000-metricton-a-year ethylene plant to be built for Formosa Plastics Corporation near Linyuan on Talwan's southeastern coast. A fast-track schedule calls for completion in early 1989.

The olefins unit, which will use Stone & Webster's USC (ultraselective conversion) process, will supply ethylene and propylene to downstream manufacturing facilities.

### **Chemical** Marketing Reporter

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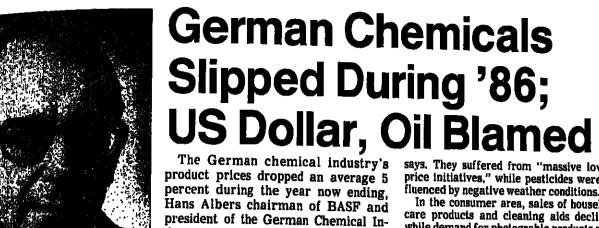
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### **Butadiene: Have Prices** Hit Bottom?

Rutadiene inventories have registered a steep decline in recent months, and sources say butadiene exchanges (lending and borrowing) are hard to come by on the Gulf Coast.

These developments have been caused by a sharp drop in butadiene imports this year, leading sources to speculate that butadiene prices have finally hit bottom. The bottom for butadiene bought on the US

Gulf Coast is 9 cents per pound. Sources say prices aren't expected to firm in the near term since demand is soft. But it appears European exporters of butadiene have watched the price sink low enough, and are now reluctant to ship product to the US at

Instead, a growing number of European ethylene producers are re-routing the crude C4 streams produced in the ethylene crackers (minus isobutylene) back into the olefin plants where the streams are co-cracked with fresh feedstocks, Eugene J. Debreczeni, a member of De Witt Consulting Group, Houston, Tex., says 10 or 11 crackers in Europe are currently co-cracking a portion of

Continued on Page 19

### Supreme Court Refuses to Hear Appeal by Ortho

The Supreme Court last week upheld a lower court's decision to award \$4.7 million to a couple who blamed a drug company's birth control product for their child's multiple birth defects.

The justices refused to hear an appeal by Ortho Pharmaceutical Corporation, which argued there is no scientific evidence linking ils "Ortho-Gynol" contraceptive jelly with abnormal development of fetuses.

The damage award is believed by industry analysis to be greater than the company's jury profits from its spermicide products, which are used by more than 3 million

Observers expressed concern that the large award, combined with what they claim as a lack of evidence in the case, could deepen the liability crisis in the case, could lical industry and courses in the pharmaceustry and prompt discontinuation of percent) and potash (6 percent) were offset by some products.

However, an Ortho spokesman says the company does not plan to take the birth con-trol product off the market and the ruling will not have any financial impact. He says ping only 1 percent. Nitrogen inventories ping only 1 percent. Nitrogen inventories were unchanged, while phosphate and US potash inventories declined 4 percent and 3 percent, respectively.

in July 1985, US district court judge Mar-yn Shoob of Georgia ruled that Ortho Phar-maceutical, a subsidiary of Johnson & John-son, was its buddary of Johnson & Johnson, was liable for various physical Continued on Page 28

spends 11 million marks every day to proteet the environment and has voluntarily content in waste water. taken a number of measures to this end. A pending agreement will cover a re-"In the last twenty years emissions of duction of halogenated hydrocarbons. chemicals have fallen about 60 percent, Dr. Albers said the new "chemical politics" of the industry's critics in Germany while during the same period production has increased by over 150 percent," he

"We are the first German — and so far as I know - the first European industry tions of chemical production. branch to give itself guidelines on envi-

Albers Vs. Environmentalists

ronmental protection," he says. As an example of the industry's environmental self-regulation he said it recently voluntarily agreed with the Fed-

Domestic disappearance of fertilizer

products was 2 percent lower in Septem-

ber 1986 compared to September 1985,

Shipments of nitrogen and phosphate prod-ucts declined 4 percent, while potash move-ment rose 5 percent. For the year-to-date

comparisons, disappearance was 1 percent

below the July to September 1985 level for all

products, while nitrogen was unchanged and

phosphates rose 3 percent. US potash ship-ments for the period were 6 percent below

Production of all fertilizers in September

was 8 percent below September 1985, while

year-to-date production was off 13 percent

compared to last year. For the month, in-

creases in production of phosphates (up 7

a 12-percent fall in nitrogen and a 29-percent

Ending inventories in September were

For the second consecutive month, exports

of all fertilizer materials rose more than 4

percent compared to the same period last

year. Increases came in ammonium nitrate, ammonlum sulfate, concentrated superphos-

drop in mixed fertilizer production.

according to the Fertilizer Institute.

dustry Association (VCI) told a press

conference for the association. Dr. Al-

bers blamed the downhill slide of the

dollar and the collapse of crude oil pric-

ing,
"Even good domestic demand was unable

to prevent sales of the chemical industry of

the Federal Republic of Germany from de-

clining about 6 percent during the first three

quarters, according to our estimates," Dr.

Albers says. He notes that although exports

declined compared to domestic sales, they

still account for 52 percent of total sales

which increased the effect of the dollar's and

In specific chemical areas, Dr. Albers says

that since the beginning of the year, sales of

basic organic and inorganic chemicals like

ammonia, sulfuric acid, ethylene and

methanol have become "less satisfactory"

while a further decline for construction re-

That wasn't the case for fertillzers, he

that more environmental controls should

be placed on the German chemical indus-

try, Dr. Albers says the industry already

oil price decline.

lated products was stopped.

use of polybrominated dipheny lether as a flame retardant. Other voluntary agreements cover soap and detergent materials and an agreement to reduce ammonium

price initiatives," while pesticides were in-

In the consumer area, sales of household

care products and cleaning aids declined,

while demand for photographic products rose.

Sales of specialty plastics and fibers held

at a high level, as they have done of late. The

same was true for dyes and pigments. "Also

sales of textile, paper and leather industry

Albers savs.

results of this year."

roducts were in general satisfactory," Dr.

In contrast progress in pharmaceuticals

appears weaker, partly, he says, because of discussion among public health authorities about the need to reduce costs. As in other

areas, pharmaceutical exports are "notably

As for the future, Dr. Albers expects little

major change during the remaining eight weeks of the year," so, in sum, we probably don't need to be disatisfied with the economic

Looking a little further ahead, he ex-

resses confidence that the German chemi-

cals industry's research budgets and invest-

ment programs now totalling about 16 billion

marks are a "clear signal" that the industry

Continued on Page 26

luenced by negative weather conditions.

are based on "principles of mistrust:"

 "That people and the environment are increasingly endangered by the opera-

"That existing legal regulations are

completely insufficient. "That further laws and taxes are needed, to hinder or avoid the threat to society and the environment.'

phate, diammonium phosphate, potassium

Overall imports rose nearly 12 percent

compared to the same period in 1985, led by

nitrogen solutions, urea, and potash prod-

Domestic disappearance of solid urea rose

108 percent in September compared to Sep-

tember 1985, and was up 75 percent for the

period. Of the remaining nitrogen products,

only liquid urea showed an increase for the

Nitrogen solutions disappearance fell 33

percent compared to September 1985. Anhy-

drous ammonia shipments lagged year-ago

Nitrogen production dropped 12 percent for the month and 15 percent for the year-to-

date comparisons. Solutions production was

levels, while solid urea production jumped 18

Ending inventories of all nitrogen products

showed no change from year-ago levels, but

anhydrous ammonia stocks grew by 22 per-

cent, nitrogen solutions by 1 percent and liq-

Solid ammonium nitrate and ammonium

sulfate inventories each fell 36 percent, while

liquid urea stocks dropped 95 percent and

Continued on Page 30

uld ammonium nitrate by 24 percent.

month and year-to-date comparisons.

levels for the month by 4 percent.

muriate and potassium sulfate.

### **Fertilizer Shipments Mixed; Exports Bolster the Market**

Rohm and Haas Company has agreed to sell a California chemical plant it purchased in 1984 from Diamond Shamrock Corporation in order to settle a Federal antitrust complaint.

**CSMA Slams** 

In Comments

Chemical Specialties Manufacturers

Association is expressing concern over a

proposal by Occupational Safety &

Health Administration to set a manda-

tory standard for the protection of labo-

ratory workers dealing with toxic chem-

In comments filed with the agency on its

proposed uniform standard for all laboratory

workers, the chemical group urges OSHA to

issue the proposed rule only as a voluntary

standard for at least those laboratories in the

industrial or manufacturing sector, cur-

rently covered by the Federal hazard com-

CSMA says OSHA has failed to demon-

strate a need for a final standard and points

out that most industrial laboratories already

have programs with precautionary measures

similar to those required by the proposed

standard to reduce toxic substance exposure

REGULATORY BURDEN

only become an additional regulatory burden

resulting in needless expense and rigidity on

Reagan Administration has failed to demon-

strate a manifest risk of injury or illness in

industrial laboratories that would be reduced

cost and regulatory burdens the proposed

standard would place on small business as

well as the manner in which it would be im-

exceeding drain on manpower and productiv-

ity if facilities are required to have written

standard operating procedures on every ac-

tivity that is or could be taking place in a

laboratory." the trade group says.

If OSHA decides a voluntary guideline ap-

proach is insufficient and issues the proposed

standard, CSMA urges the agency to exempt

laboratories that are covered by the haz-

ardous communication standard from the

Rohm & Haas

Agrees to Sell

**Chemical Plant** 

"It is our viewpoint that it would be an

plemented and enforced by OSHA.

In addition, CSMA questions the economic

The trade association also notes that the

the regulated community," says CSMA.

by the proposed standard.

proposed new standard.

"A mandatory standard in this area will

munication standard

to workers.

**OSHA Rule** 

The Justice Department filed an antitrust suit against Rohm and Haas in US district court, challenging the acquisition of Duolite International Inc. on the grounds that it reduced competition for a specialty product used in water treatment equipmen

The government contends that the purchase of Duolite's California plant gave Rohm and Haas more than a 50 percent share of the \$112 million annual US market for ion exchange resins. As a consequence, the government says the acquisition is likely to "substantially lessen competition" in the resin

The antitrust suit is one of only a handful filed by the Justice Department during the

In 1983, Rohm and Haas was the top US producer of ion exchange resins with a 35 percent share of US sales. Duolite ranked third with a 16 percent share.

The \$45 million purchase from Diamond

Shamrock also gave Rohm and Haas Duolite's assets in France plus the firm's plant in Wales. Altogether, Duolite ranked second in worldwide sales behind Rohm and Haas.

In court documents, Justice says that as a result of the acquisition, "actual and poten-

Continued on Page 48

November 17, 1988

CHEMICAL MARKETING REPORTER-

CHEMICAL MARKETING REPORTER

November 17, 1986



### Punctilious ethyl alcohol means consistent shipment-to-shipment quality. It also means U.S.I.

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sentative for more information. Or contact U.S.I. Chemicals Co., Dept. 4563, Div. of National Distillers & Chemical Corp., 11501 Northlake Drive, Cincinnati, OH 45249, (513) 530-6772.





GRACE PICKS EXECUTIVES: J.P. Bolduc, Terrence D. Daniels, and Paul D. Paganucci, who have been elected vice chairmen of W.R. Grace & Co. J. Peter Grace, chairman, chief executive officer and president, said the appointments "will ensure an orderly transition for our company's manage-

### Phelps Dodge Will Buy Carbon Black Producer

Monoclonal Antibodies Show

copper producer in the US, has agreed to ourchase Columbian Chemicals Company, a major producer of carbon black, as part of a corporate diversification plan the company announced last week.

Financing for the acquisition, which should be completed by December, pending approval of Phelps Dodge's board of directors, is help arranged by Morgan Guaranty Trust

Carbon black pigment is used primarily in rubber applications such as automobile tires, as well as industrial applications including plastics, coatings and building products.

G. Robert Durham, president of Phelps Dodge feels that Columbian Chemicals will be a comfortable fit for the company. Its earnings, less cyclical than copper's, should 'belp us bridge the deep troughs that affect copper price from time to time," he says, praising Columbian's "able management team, which will continue to manage and

Columbian Chemicals, a privately-owned

satile tools under study in the animal-re-

aledresearch laboratories of the United

States are high-tech, disease-fighting

proteins called monoclonal antibodies. Their promise is outlined by Dr. David B. Snder of the University of Maryland in the 1988 Yearbook of Agriculture, "Research for Jonotrops" "Released for Jonotrops" "Released for Jonotrops" "Released for Jonotrops " Released for Jonotrops " Relea

Tomorrow," released last week by the US Department of Agriculture. Dr. Snyder is as-

stant professor at the university's Virginia-Naryland Regional College of Veterinary

In an article entitled "Improving Animal Health Through Monoclonal Antibodies," Dr. Shyder leases readers' imagination with such

incers could choose the sex of their next

call? Better yet, what if a veterinarian could

successfully locate and destroy tumors in

valuable animals without using surgery, ir-

Other questions he poses deal with identifying diseases exactly and quickly, determining best times to hand a mighty determining best times.

ing best times to breed, and quickly deter-mining if milk is free from contaminants.

Dr. Suyder expects monoclonal antibodies
to bring all of these baselies and others in the

obring all of these benefits and others in the

Monoclonal antibodies already are at work lighting economically significant animal dis-

adiation or chemotherapy?"

/ely near future.

Phelps Dodge Corporation, the largest duces synthetic iron oxides, operates five carbon black plants in the US, and, through its subsidiaries, plants in the UK, Canada,

> pleased to join the Phelps Dodge group of companies. Our customer relationship should be strengthened by our becoming part of this larger and publicly-owned organiza-tion, and our management team looks forward to our new relationship, which I believe will benefit both companies.

the UK earlier this year.

\$230 million. The company, which also propected to close by the end of this year.

them are cloned and that they attack only one

targeted aspect of an invading organism.

They derive their rainbow of capabilities

from their ability to attack and neutralize

specific targets within a "forest" of attack-

For instance, Dr. Snyder writes, mono-

cional antibodies could be used as "magic

bullets" to seek out and destroy specific in-

out the complications and expense of

a series of very quick and very sensitive tests

is surfacing. Dr. Snyder says these will allow

a farmer to identify in a very short time

exactly which agent has infected his or her

poultry flock, replacing tests that now take

days or weeks to complete. A corrective ther-

apy or vaccination program can then be ap-

plied much faster and economic losses cut

Carrying this a step further, Dr. Snyder

Continued on Page 36

foresees monoclonal antibodies used in the

is and algorithms from

With the advent of monoclonal antibodies,

surgery, chemotherapy or irradiation.

ers brought in by an invading organism.

West Germany, Italy and the Philippines.

The company's chairman, Ladislaus Von Hoffman, affirms, "Columbian Chemicals is

The carbon black industry in the US, af-flicted by overcapacity and imports, underwent considerable restructuring this year. when Phillips, a leading producer, left the market. Columbian Chemicals acquired Phillips' "Echoblack" plant in Orange, Tex., and its plant in Hanover, West Germany this June. It also took over Phillips' share of a "Sovalco" carbon black production facility in

Phelps Dodge intends to maintain its position in the copper market, Mr. Durham states. In September, the firm announced an agreement to purchase Kennecott Corporafirm based in Atlanta, earned a net profit of tion's two-thirds ownership of Chino Mines \$23.2 million last year on sales of \$305 million Through September 30 this year, its net mine, mill and smelter and complex in southearnings totalled \$19.8 million on sales of western Mexico. This transaction is also ex-

### **EPA Draws Praise** For Toxics Proposal

certain hazardous wastes will mean a posal," he adds. substantial improvement over past proposals for dealing with toxic contaminants, say environmentalists.

Environmental Protection Agency issued new rules, effective November 8, prohibiting land disposal of dioxins and spent solvents and requiring instead treatment of the substances to reduce their toxicity. Only the less toxic residues will then be permitted to be disposed of on land.

Environmental Defense Fund praised the move as an improvement over an earlier agency proposal, saying the plan "would have made the land ban no ban at all." But the group criticized a section of the

EPA plan that offers exemptions of up to two years in cases in which treatment capacity is not adequate to handle the waste materials. EPA already has granted extensions for

several sub-categories of solvent wastes, most of them wastewaters. The materials covered by exemptions may continue to be disposed of on land until November 8, 1988. "The new restrictions on the land disposal of solvents and dioxins represent a signifi-

cant turning point in hazardous waste management," says EPA Administrator Lee

"These rules will substantially reduce long-term public health risks by requiring treatment of hazardous wastes to reduce or

Solvents are used throughout industry, primarily as degreasing agents. Some of their components have been linked to cancer in laboratory animals.

The regulations are the first in a series of requirements outlined in 1984 amendments



### **EDB Ban Poses Problem** For a Hard-Pressed EPA

Nearly three years after Environmental Protection Agency took emergency action to ban ethylene dibromide from the market, 328,000 gallons of the carcinogenic pesticide remain stored in warehouses across the nation, much of it possibly leaking from corroded drums.

Although the government paid EDB manufacturers \$2.3 million to recall the pesticide it banned in February 1984, EPA officials acknowledge they have not been able to properly dispose of any of it.

At a special congressional oversight hear-ing in Washington last week, Douglas Campt, EPA's director of pesticide programs, said a number of complications have kept the agency from getting rid of the EDB still stockpiled in 42 states.

He said those complications include developing a workable disposal plan, selecting a contractor, acquiring state and local permits to chemically reprocess the EDB, and the

manufacturers for their recall.

"The suspension of EDB was an emer gency action necessary for the protection of the public health a situation that did not allow for advance planning," Mr. Campt explained to the House government operations

He said the chemical companies paid for recalling the EDB are responsible for its storage, but because of the widespread leakage, EPA may have paid for some empty

Most of the EDB is stored in Kansas, including some 60,000 gallons at an EPA laboratory in Kansas City, Kan. The material was originally held at a Vulcan Chemicals Company warehouse in St. Joseph, Mo., but was moved after EPA inspectors discovered leaking canisters last August.

After 20,000 gallons of the pesticide reached Kansas City, the city council voted to

#### Among the most promising and ver- eases such as scours. One corporation awaits Scientists Are in a Flap government approval to market a monoclonal antibody treatment for pseudorabies **Over Biotech Field Testing** in piglets, a herpes-related disease with a high fatality rate. Monoclonal antibodies get their name from the fact that the cells which produce

Foundation participated last Summer in field-testing a genetically-engineered rables vaccine in Argentina without seeking approval from the Argentine or US governments, it was reported last

The Argentine government learned about the test in September and barred any further experimentation.

IS officials and scientists said the test, in which 20 cows were innoculated in July with a gene-altered viral vaccine at the agricultural station in Azul, raised questions about the effectiveness of the Reagan Administration's program to regulate the products of

biotechnology research. "I am not bothered by the idea of US research institutes and companies going abroad for their testing," said Dr. David Kingsbury, assistant director of the National Science Foundation, the nation's oldest biomedical research institution.

But Dr. Kingsbury, who coordinated the

Scientists from the National Science development of the Administration's regulatory program, said he was "appalled they did it without the knowledge of that country... Given the volatility and concern on this issue, you just don't do things like that."

Regulations signed by President Reagan in June do not prohibit US companies or research laboratories from testing genetically aftered products in other countries.

The vaccine, according to Dr. Hilary Koprowski, director of the Wistar Institute in Philadelphia, has been under development since 1983,

Researchers at the institute spliced the single rabies gene into vaccinia, a common virus that has long been used to produce vaccines, including the smallpox vaccine.

"We have a lot of experience with this kind of vaccine," said Dr. Koprowski. "It was not my business to bring this to the Argentine government. It is my understanding that experiments done on the premises of the United Nations are under the responsibility of the

Continued on Page 46

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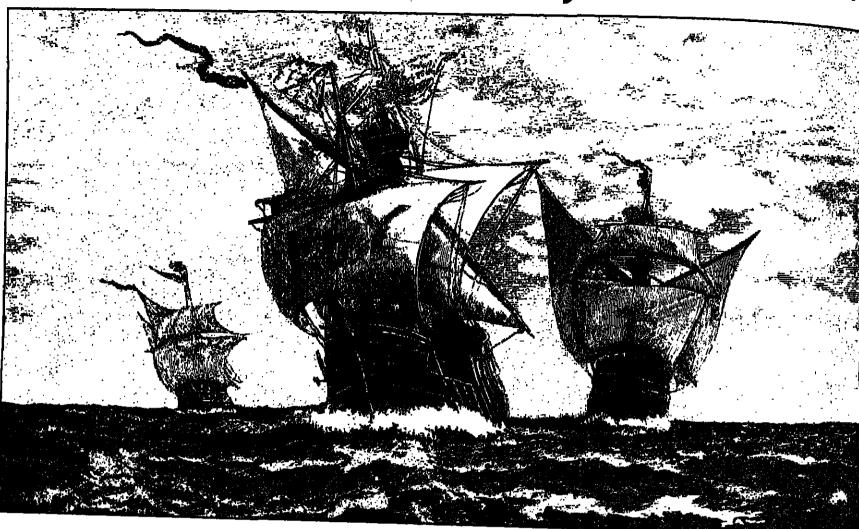
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Carbonyl Diimidazole Diisopropylethylamine N-(Benzyloxycarbonyloxy)-Amino Acid NCA's (N-Carboxyanhydrides) Dipeptides



Church & Dwight Company Inc. has completed the acquisition of National Vitanin Products Company of Minneapolis.

BioTechnica International Inc., Cambridge, Mass., says it has been awarded a atent for a novel method for the purification of phenyalanine, a major componen of the artificial sweetener, aspartame. responding patents covering the company's process are pending in other coun-

#### **Cal Biotech Forms**

California Blotechnology Inc. has ormed a new international subsidiary. alifornia Biotechnology International o direct and implement the company's passion outside the US. The first entity of the subsidiary will be Pacific Biotech ™logy Ply., a joint venture in Australia.

Shell Nederland BV has started con especied to be completed by the middle of 1987. The total project is expected to stream toward the end of 1988.

### Mobil Sets Hydrotreater

lion. Ralph M. Parsons Company will work on modification of existing refinery units and M.W. Kellogg Company will hall the bridge of the company will

### <sup>loo</sup>dyear Acquires

dyear Tire & Rubber Company will transfer the technology of its newly acouired subsidiary, Howdins, Ltd., in Britain to Goodyear technical centers in uxembourg and in its Akron, Ohio, headquarters, and will end Howdins' operalions in the UK. Goodyear still has about a week and a half to come up with a restructuring plan satisfactory to Sir James mith, the financier who is threaten-



### Univar Gets McKesson

Univar Corporation has completed the purchase of McKesson Chemical Company. Univar will merge San-Francisco-based McKesson with Van Waters & Rogers Inc., Univar's domestic chemical icidibution subsidiary, based in San Maeo, Calif. Univar says the acquisition makes it the largest chemical distributor

#### Church & Dwight Buys

Valional Vitamin produces milk-based products for the dairy herd replacement. eal, swine, horse and specialty markets and has plants in Minneapolis and Elmira,

#### BioTechnica Wins Patent

John G. Harron, who has been named president of SunOlin Chemical Company, Claymont, Del. SunOlin is a joint venture of Sun Company and Olin Corporation.

Borg-Warner's

While Irwin L. Jacobs, an investor

percent, the company pressed ahead

with its program to ward off an un-

wanted acquisition by restructuring it-

Borg-Warner, a diversified producer of air

conditioning equipment and acrylonitrile-bu-tadiene-styrene plastics, said it would put its

Financial Services, Inc., subsidiary up for

The financial subsidiary, which does busi-

ness primarily as Borg-Warner Acceptance

Corporation, is the fourteenth largest finance

company in the US, according to the American Banker. Its net receivables at the end of

The key advantage to Borg-Warner in sell-

ing off the financial unit is that it will free up

Continued on Page 27

Vista Chemical's

of polyvinyl chloride and detergent

chemicals which was once part of the

Conoco Incorporated operation of E. I.

du Pont de Nemours & Co., is planning to

make an initial public offering of

The offering will be made through an un-

derwriting syndicate managed by E. F. Hut-

ton & Co. at a price which is expected to be in

Proceeds will be used to redeem the com-

pany's outstanding special preferred stock,

to repay indebtedness to be incurred to re-

purchase 3,705,000 common shares issued

completion of the offering, and to reduce

be sold by the company and 464,000 by certain selling shareholders.

Vista, which went private three years ago

Continued on Page 23

Of the shares to be offered, 3,984,000 will

term indebtedness.

4,448,000 shares of its common stock.

**Public Offering** 

Is Firm's First

1985 totaled \$4 billion.

**Financial Unit** 

**Put Up for Sale** based in Minneapolis, Minn., raised his stake in Borg-Warner Corporation to 7.4 percent, or 6,460,000 shares from 6.1

#### Shell Starts BPA Project

ruction work at its Pernis site near Rotdam, for a \$60 million modification of bisphenol-A plant there. First part of he project, which will enable the commy to produce bisphenol "F" (diphenylo hane) and epoxy resins based on it, is

Mobil Oil Corporation has awarded contracts for construction of a hydrotreater to cut sulfur emissions at its refinery in Torrace, Calif. Construction, scheduled to begin late this year toward completion by late 1988, includes the hydrotreater, a ydrogen plant and a sulfur recovery unit The entire project will cost over \$200 mil-

### UCC Sells Business

Union Carbide will sell the assets of its lectrical carbon business to the UK's Morgan Crucible Company for \$25 million in cash. Carbide says the transaction will have no material effect on earnings. The Fraphite electrodes business and other carbon-based products sold by UCC's carproducts business group are unafcted by the sale.

ing to take over the company.



poisonous chemicals spilled from a Sandoz facility at Schweizerhalle (Basel) had moved down the Rhine and into the North Sea, leaving behind some 500,000 dead fish and a political outcry that could very well lead to tougher chemical regulation particularly in Germany. The accident is potentially one of the worst European ecological disasters of recent

By the time the mixture of solvents, insecticides, herbicides and other pesticides finally reached Holland it had lost some of its potency. No fish died in the Netherlands, although some smaller fauna were injured.

On Friday, Swiss environmental officials said that the Rhine will need up to ten years to regain its ecological balance. They said it is unlikely that the fish population will be restocked for several years. Thirty-four species will be reintroduced, but according to the authorities the fish population cannot reurn to its previous level for a decade.

The police, meanwhile, were investigating to determine whether the fire that caused the

### Sandoz Spill in Rhine To Have Many Effects

short circuit or sabotage, amid reports that the company might have violated Swiss law by, for example, storing chemicals in an area designated for machinery. Firefighters poured thousands of gallons of water per minute on the Sandoz plants and washed the chemicals into the river.

Even as the early effects of the chemical release were slowly abating there is fear of the delayed consequences that tons of mercuric compounds could have on the river. The plume of toxic chemicals was 42 kilometers

The major immediate problem is the

residue of toxic waste on the river floor. For the recovery to begin, micro-organ isms have to drift into the polluted parts of the Rhine from upstream or tributaries, according to Peter Pettet. a Swiss environmental official. After six to ten years this would bring the level of aquatic life back to normal

One long-term problem is that the toxic chemicals that settled on the river floor or flowed into the North Sea could eventually enter the human food chain through fish,

Continued on Page 69

### Insect Pests Targetted

Controlling insect populations by tin-kering with insect brains is not new, but some "mind-tinkering" chemicals discovered lately promise a higher degree of safety than most chemicals used in pest control, says Dr. Michael E. Adams, assistant professor of entomology at the University of California in Riverside.

Writing in the 1986 Yearbook of Agriculture, Adams describes two of the newer chemical insecticides which control insects' hormonal systems through their brains: chlordimeform and metho-

While there are forms of biological controls-such as sex attractants and viral diseases—that harm only the target pest, chlordimeform and methoprene are the

first chemical insecticides targeted primarily to insects.

Dr. Adams says the most effective of today's crop protection insecticides are nerve poisons which are toxic to nontarget organisms as well as to targeted insects. The new chemicals, on the other hand, tinker with neurohormone systems that are peculiar to insects, not to humans

When chlordimeform is sprayed on plants, Dr. Adams says, caterpillars are so disoriented after just a few bites that they leave the plants. And, when: chlordimeform is sprayed on the eggs of these insects, the eggs fail to hatch.

The insecticide works by changing sig-Continued on Page 26

### **Diagnostics Market Reflects Shift in Health-Care System**

industry because of cost containment pressures are resulting in major shifts in

the structure of the health-care system. The market for clinical diagnostics products reflects these changes more than any segment of the health care industry, accord-ing to Eric Rosenbaum, of Arthur D. Little, Vista Chemical Company, the Houston, Tex.-based privately held producer

Mr. Rosenbaum, who has completed a study of the US clinical diagnostic market, says demand for clinical diagnostics products will grow at 9 percent a year from \$3.7 billion in 1985 to \$5.7 billion in 1990.

"Within this market the most rapid growth, in percentage terms, will take place over-the-counter (OTC) and in physicians' of-fices," he says, adding that the hospital mar-ket will still account for 70 percent of product sales in 1990.

provided by hospital and commercial laboratories, physicians' offices, and drugstores is the prospective payment system for reimbursement of hospitalized patients on Mediupon the exercise of warrants prior to the care.

"Prior to the introduction of Diagnostic there was a spendthrift attitude towards di-agnostic testing because of lenient policies that called for 100 percent reimbursement." Mr. Rosenbaum comments. "Today, a far more fiscally conservative attitude prevails

Dramatic changes in the health-care because every test performed is charged according to a fixed reimbursement fee."

According to Mr. Rosenbaum, the number of physician office laboratories will double in five years. "In 1985, there were 22,500 laboratories in physician offices, and by 1990, there will be approximately 48,000," he pre-

"This rapid growth is due to a significant shift from individual and small group prac-tices to larger group practices which are bet-

The A.D. Little executive says clinical chemistry represents one-third to one-half of the total lab business in the hospital. "We have good reason to believe that while at present, clinical chemistry is only one fourth of the business in physician offices, the same potential exists," he says.

This opportunity, according to Mr. Rosen-The major force for change in clinical di-agnostics products, as well as paid services physician practices that can afford to hire in-house laboratory technicians. At the same time, because of DRGs, some of the tests formerly performed in the hospital prior to surgery are now being done outside the hospital in the doctor's office,

The result of the market moving away Related Groups (DRGs) in October 1983, from the hospitals and commercial reference labs, is that physicians are in a strong position to take advantage of this new opportunity," he says.

He emphasizes that diagnostic products Continued on Page 21





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### OILS, FATS & WAXES

### Coconut Oil Pricing Levels Supported by Dealer Trading

than it has been since January of this year. At the same time, the market has been very erratic lately and seems currently to be easing downward. Dealers and traders are not ready to call this a trend, though, given the unpredictable nature of the market in recent weeks.

The price began steadily rising in September, largely as a result of a spurt of dealer rading. In October the rise became considerably sleeper, jumping 7 cents during the course of the month. Since late last month the price, though high, has been erratic and un-

For the most part, the market has been running on the strength of dealer to dealer trading since the initial firming began two months ago. Since that time the fundamentals have changed little, sources say, in that consumer buying is at a minimum, oil is readily available, and the market is being supported by dealer trading.

The changes that have been seen have been in the level of paper trading and the subsequent effects on pricing. According to a broterage source, higher pricing saw the introduction of more copra onto the market. which served to weaken pricing.

**BUYING BACK COPRA** Some origin dealers had been buying the material back, the source says, and then releasing it when prices firmed again. "An origin miller and US and European dealers were coming in and buying whenever the market softened," says a brokerage source. The result of activity like this has been the nstability seen in the market, he says.

Consumers, in the meantime, are staying away from these strong levels, having stocked up extensively when prices were low.
"Consumers don't need the material right now," says a buyer. "We'd have a hard time elling end-products with these raw material costs," he says, referring to production of

Noting that the market cannot thrive for thout consumer activity, a source lays "Dealers can't do this forever — they ship eventually." Other sources igree, pointing out that producers in the plies are likely to be anxious to fill wary contracts soon.

They still have quite a bit of oil to sell before January," says a source, noting that freight commitments and impending holiday time off will spur the Philippines producers to sell by the middle of December. "Since they want to sail or the producers to sell by the middle of December." they want to sell, prices may come down,"

### FRIDAY SPOT PRICES MARKET CLOSE NOV. 14, 1986

CRUDE VEGETABLE OILS

Scould all, Pacific	.20% .NA .20% .17% .25 .16% .30
 REFD, VEGETABLE OILS Coconut oil, t.w., NY	.25½ .2860 .27 .3930

OILMEALS 

FATS & GREASES

rease, white, choice, tanks, divid., NY...ib. ...1044
kesse, yellow maximum 10%, ffa tanks...ib. ... 9½
Lan, house, bulk tanks, divid., Chicago ... ib. ... 13
Takow, hedible, fancy, tanks, divid., NY...ib. ... 1214
Takow, hedible, bioh., tanks, divid., NY...ib. ... 12

At the same time, US buyers' supplies are thought to be starting to ease their way down. "In another month or so consumers will have to buy," says a consumer. Asked to predict what will happen next, a brokerage source

### says, "The price may come down, but the **PRICES TRENDLINES**

WEEK ENDING NOV. 14, 1986

#### CHANGES/UP

Cottonseed oil, Valley, 1/2c. per ib. Linseed, extracted, 34% bulk, Minnespoli \$5 per ton
Palm oil, NY, 1/2c. per ib.
Soybean, 44% bulk, Decetur, .80c. per ton

#### **CHANGES/DOWN**

Coconut oil, NY, Vc. per lb.
Cottonseed, 41% bulk, Memphie, \$5 per ton
Lard, loose, bulk tanks, Chicago divd., 2c. per lb.
Peanut oil, Southeast (restricted), Vc. per lb.
Soybean oil, Decatur, .59c. per lb.

#### OILS, FATS INDEX

The Oils, Fats & Waxes index reflects the prices of 11 representative materials n this sector and the quantity of each

	Chemical Prices Start on Page	
	17, 1986 15, 1985	
Nov.	7, 1986	82.74
Nov.	14,. 1986	81.81

consumers may also panic first and buy." At this point, traders feel that it is a waiting game to see whose needs are greater, those o the buyers or those of the sellers.

CORN OIL - Availability of this oil conlinues to be very tight, with prices maintaining strength and easing upward. Consumers are said to be staying away from these high corn oil prices, except for free-standing refiners who do not have their own crushing

Interest among these refiners is strong sources say, which is helping to keep the mar-ket as tight as it is. This interest is expected to remain at its current high level until early December, when refining activity generally sees a slowdown, according to an industry source. At that time it is hoped that crushers will be able to catch up to demand and begin

to ease the tight supply situation.

LARD — The price of lard is down from last week's level, and has come down a total of more than 4c. per pound over the last four weeks. Traders have been seeing declining buying interest in lard, in both the domestic and export markets. The drop in interest is attributable to consumer avoidance of cholesterol, and increased switching to lower-cholesterol vegetable fats, according to an industry source.

PEANUT OIL — The market for this oil is quiet, as consumers are staying away from the high levels reached by peanut oil prices in recent weeks. Sources say that the buying that is going on is primarily among those buyers who tend to go specifically with peanut oil, while those who can substitute are

doing so.

Prices are not expected to ease appreciably in the near future, though, since supplies are tight. At the same time, slack demand should prevent any serious shortages from occurring, sources say. As one brokerage source put it, "You can find enough oil to satisfy the thin demand that's around."

Since world peanut oil prices are generally lower than those of US oil, export business for US dealers has been nil, sources say. The price of US oil is not expected to rise much further, since it is already nearly as high as the US cost of imported oil.

RAPESEED OIL - The price of this oil hascome down to 521/4 to 561/4c. per pound, in Continued on Page 15

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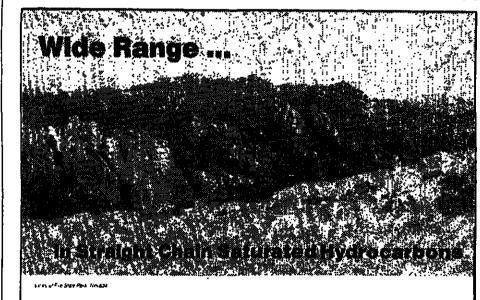
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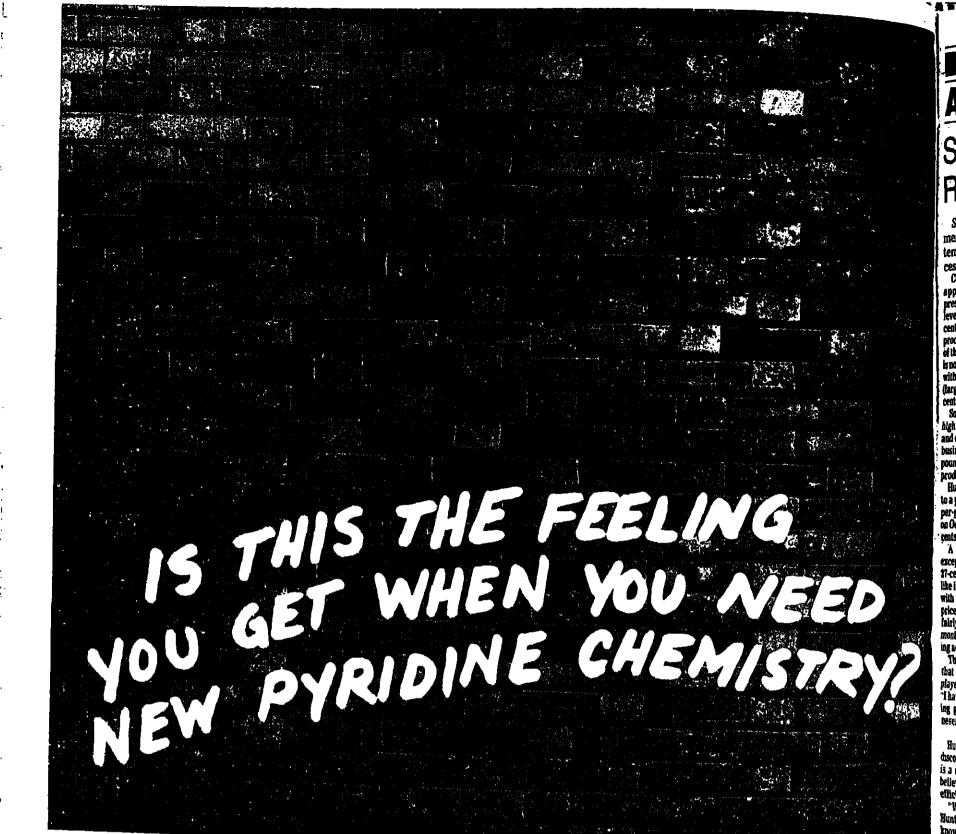
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### AROMATIC ORGANICS

### Styrene Makers' Recent Gains Reflect Demand and Downtime

ember has met with considerable suc-

cess.
Contract pricing in August was reported at approximately 18 cents per pound. At present, most producers quote a contract level of 24 cents per pound. "By and large, 24 cents (per pound) is our base level," says a reducer, and an analyst observes that "most of the market is at 24 cents (per pound); there is not much (business) below that." However. with discounting, a producer notes, "most (large-volume) transactions are around 23

cents(per pound)."

Some producers announced list prices as high as 27 cents per pound for November 1, and one says "there was a potential for some business to move at 25 cents to 26 cents (per pound)," but this became difficult when one producer did not make a change.

Hunisman Chemical Corporation moved to a trice of 25 cents per pound less a 3-centper posed temporary voluntary allowance on October 1, and currently is said to be at 23 emisper pound.
A rival says that "producers, with the

exception of one, got up to the 24-cent- to ??-cent-per-pound (list price) range. It looks like it's shaking out at 24 cents (per pound)," with the granting of TVA's off the higher prices. Producers note that the market was fairly quiet during the first two weeks of the month, as there was a fair amount of pre-buying activity in late October.

Though competing producers point out that Huntsman is not a particularly major player in the merchant market, one says that have seen knowledge of Huntsman's pricing get out to some customers who have effrused them in the past.'

CONTRACT POLICIES

Runtsman has asserted that it does not discount off its list price level, which it feels is a realistic reflection of the market, and elleves that the market might operate more disciply if other producers did the same.

"We are not specifically aware of any Buntsman contracts with discounts," ac-knowledges a rival. However, when word of Huntsman's low list level gets out, his large mers tend to expect that price to be matched without at the same time offering to elaquish the discount provision of their con-

Another producer defends the policy of granting discounts. "It's unrealistic to think that when the policy of granting discounts is a second of the policy of granting discounts." that everyone is going to pay the same price." be says, citing such factors as economies of scale and geographic location.

Producers attribute the upward pricing heed in recent months in part to the passing arough of higher feedstock benzene costs. Since September 1, benzene spot pricing has the 10 cents per gallon, and contracts have the 7 cents for gallon. hien 7 cents to 10 cents per gallon.

Strong demand from the polystyrene sec-lered not tail off during the third quarter as redicted based on the usual seasonal pat-ical it is estimated that demand from this its, which accounts for better than half of the styrene consumed, is running close to 10 Percent ahead of last year's pace.

discheduled downtime in the industry, on 4) of numerous routine maintenance Brounds, has played a role in tightening

A 900-million-pound-per-year part of the plannar facility in Carville, La. went down servicedly for 8 days in September; Fron Corporation's 625-million-poundrear St. James, La. plant was forced for about half of October; most rehally. Shell Canada's plant has reportedly with a substantial amount of production durble past week or so due to problems with a

Styrene producers say that the movement to raise prices that began in Sepment to raise producers say that the move-during the third quarter fell off by a third from second-quarter levels. Non-US producers ers, recognizing the strong US demand and higher price, more than doubled the amount of materials they shipped into the US market from the second to the third quarter.

In the months to come, producers say they expect the market will continue to be firm

### PRICES TRENDLINES

WEEK ENDING NOV. 14, 1986

CHANGES/UP

CHANGES/DOWN

#### **AROMATICS INDEX**

The Aromatic Organics index reflects the prices of 14 representative materials In this sector and the quantity of each produced in 1985.

Nov. 14, 1986	167.84
Nov. 7, 1986	167.84
Oct. 17, 1986	167.84
lov. 15, 1985	167.84

Chemical Prices Start on Page 52

given expectations of strong polystyrene demand, maintenance turnarounds scheduled for the early months of 1987 and stable or slightly higher feedstock pricing.

AROMATIC SOLVENTS - Amoco Chemleals Company says that pricing on two of its highly aromatic naphthalene solvents has been cut this month.

"Panasol AN-2L" has come down 40c. per gallon, to a level of \$1.25 per gallon, from the previous price of \$1.65 per gallon. "Panasol AN-2K" has moved down 40c. per gallon, to a price of \$1.10 per gallon from the previous level of \$1.50 per gallon.

The company attributes the changes to a passing through of lower basic aromatics pricing this year and market trends. The prices of the two products had been unchanged since June 1984.

Amoco says that its "Panasol AN-3N" price is holding steady at \$1.05 per gallon. This price was reduced in April.

BTX — The spot benzene market last week was quoted at 87c. per gallon, up from 85c. the previous week, and equal to the general contract price level in the industry. One producer, Standard Oil, has a posting of 90c. per

According to a trader, the market was "not frantic, but firm" last week. Contributing to the firmness in the market, he says, has been strong demand for the major derivatives styrene, cumene, and cyclohexane.

Imports of benzene into the US during the month of September fell to 5.9 million gallons, the lowest level in more than a year, according to Bureau of Census figures. One market player says that, should spot pricing reach the 90c. per gallon level, heavier imports are likely.

Since September 1, the spot benzene marlon, from 77c. to 87c. per gallon. Spot toluene pricing, on the other hand, was quoted last week at 67c. per gallon, equal to its September 1 level. The widening spread has led to speculation in the industry over the possibile startup of some hydrodealkylation capacity.

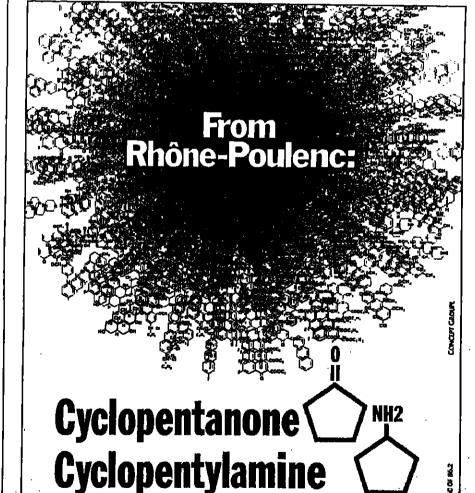
The toluene market actually did keep pace with benzene last week, firming 2c. per gal-lon from the previous week's 65c, per gallon

Burean of Census trade figures for the duarter reflect the changing styrene of the trend towards higher pricing to year-of the with domestic producers hard-

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CHEMICAL MARKETING REPORTER

November 17, 1986

### **AROMATICS**

inventory...suppliers don't want to sell, and ouyers want to buy," he says. It is noted that buyers have an incentive to bolster inventories in order to avoid the 1.8c. per gallon Superfund tax that becomes effective Janu-

Xylene contracts are said to have been settled on at 761/2c. per gallon. Leading buyer "Amoco was at 75c. (per gallon), the others were at 78c. (per gallon), so they split the difference," says a trader. The spot market had been approaching 80c. per gallon, but weakness in the paraxylene sector report-

edly provided some downward pressure.

BENZOYL CHLORIDE — Occidental Chemical Corporation says that, effective November 17, it is increasing its off-list price for tanktrailer and tankcar peroxide grade benzoyl chloride by 5c, per pound on spot purchases and as contracts allow. Pricing is f.o.b. Niagara Falls, N.Y., freight allowed.

List pricing will be unchanged at 63 1/2 C. per pound, freight allowed, on tanktrailer and tankcar deliveries. The off-list price ad-justment on bulk shipments is attributed to increases in labor and raw material costs. Prices for drum quantities remain un-

changed.
NITROTOLUENE — First Chemical Corporation says it is raising its p-nitrotoluene price by 15c. per pound, effective immediately for spot material and as contracts permit. The bulk price changes from 75c. to 90c. per pound, f.o.b. Pascagoula, Miss., and the drum price for truckloads rises from 90c. to \$1.05 per pound in truckloads, f.o.b. New Or-

A company spokesman says the move reflects tightness in the market, which could be aggravated next year should production tail off due to slackening demand for the o-nitrotoluene isomer in the agricultural sector.

TDI - Producers of toluene di-isocyanate say they will be increasing selling prices by 8c. per pound, effective December 1. New selling prices are not to exceed list pricing, which remains at \$1.01 per pound in bulk.

"Material is short, and the market is very tight," says one producer, and another comments that the price increase "is justified on the basis of demand and the need to restore profitability" to the industry. An industry-wide price initiative during the first quarter of this year was, for the most part, unsuccess-

Producers point out that the export business has been strong, with attractive prices overseas, and that feedstock toluene, costs have been firm. From a supply standpoint, it is noted that numerous turnarounds are scheduled in the coming months.

TOLUENESULFONYL CHLORIDE -Akzo Chemie America, Chicago, and Rit-Chem Company, Inc. say their pricing on p-toluenesulfonyl chloride has risen in recent

weeks to \$1.55 per pound for direct delivory.

Biddle Sawyer Corporation announced a price increase earlier this month to \$1.65 per pound for direct shipment. A Rit-Chem spokesman does not rule out further increases in his company's pricing in the weeks to come, saying that "prices are increasing every day from Japan."

Biddle Sawyer receives its material from Japan as well, and both suppliers point to the reduced value of the US dollar against the yeu and lower saccharine production levels, upon which p-toluenesulfonyl chloride production depends indirectly, as reasons for the

Akzo Chemie receives its material from the Netherlands, and says it is sold out for the remainder of 1986. A spokesman notes that orders already booked will be delivered.

### Carbide Sells

Continued from Page 3

blcides and fungicides thereby enabling Rhone-Poulenc to more effectively serve all segments of the US farm business sector. We are confident this change will position Rhone-Poulenc as one of the 'new generation' of companies serving agriculture both in the US and worldwide."

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### **Lummus Crest**

response to what the company "changing conditions in its wind ingat light levels, sources say.

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### OILS, FATS & WAXES

Continued from Page 11

drums. The fall in price is the result of new cropoll's presence on the market. The yield is gaid to be strong, promising a good supply

this year.

"The Canadian crop is all in," says a source, who is saying that "it looks like a bumper crush" for rapeseed this year. The size of the crop is said to be attributed to be attributed to be attributed to be size of the crop is said to be attributed to be size of the crop of supranteed mining. incentives, in the form of guaranteed minimum returns, offered to farmers in Canada. The quality of the European rapeseed oil

continues to be poor, a source says, resulting in more inquiries to US crushers and refiners from buyers in Europe and Japan. The US crop, not due for harvest until Spring, is said to be in good shape. SUNFLOWERSEED OIL — The price of

Being Realigned for crude material, f.o.b. Minneapolis. The recent completion of the harvest resulted in a this oil is quoted at 151/2c. to 16c. per pound Combustion Engineering locals aligning its Lummus Crest subdisplayed response to what the computer of their seeds before they wanted to according to an industry source. Currently sipplies are plentiful and the market is trad-

At present dealers are waiting for some C-E says that beginning in 1887, leans export business to Mexico. The expected or-Crest will concentrate process bosiness ders from Mexico have been delayed, though, neering and construction work at hoster by the efforts of their government to support in Houston, Toronto, and the Hage, min:

their own crushers. As a result, Mexico has been buying US seed, transporting it to its center from Bloomfield, N.J. to live:

Tex. They will share facilities with their says. This is less economical than buying US ing Crest engineering center in Houses oil, says the source, and present expectations are that Mexico will be in the oil market by

TUNGOIL -- The price of this oil is quoted . between 31c. and 33c. per pound for material The process technology division will intanks imported into New York. Trading is progressing at normal levels, with "reason-ably good" demand, according to an industry source At the moment supplies are ample, for refining. Technologies such as the dat rumors of a short crop in Brazil persist. ethylene, cumene, styrene, and the "A: "We keep hearing about a short crop and Impending higher prices, but we still haven't seen anything," says a source.

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### **USDA Scientist** 'Distinguished'

A researcher who uses ultraviolet light and bacteria to detour farm chemicals from polluting groundwater is the US Department of Agriculture's 1986 "Distinguished Scientist of the Year."

Philip C. Kearney, a biochemist who heads the Pesticide Degradation Laboratory in Beltsville, Md., will receive the highest award given for scientific achievement and leadership by USDA's Agricultural Research

ARS administrator Terry B. Kinney, Jr. will announce Kearney's award and awards to 10 other agency scientists during a ceremony in Washington Tuesday.

"Dr. Kearney is a versatile scientist, an innovative leader and a creative researcher," says Kinney. "Many farmers now dispose of pesticide wastes somewhere on their land, so Kearney's work to economically degrade those wastes right at the dump site, before they pollute groundwater, will benefit future generations as well as our

Dr. Kearney designed a mobile unit that combines high-energy ultraviolet light with oxygen to break down a pesticide before it enters the soil. "We moved the unit to a research farm and tested it on 11 major pesticides and were able to break down every one of them," he says.

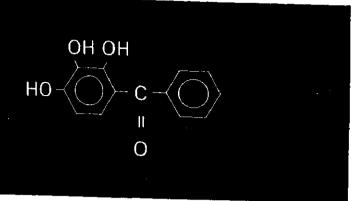
Dr. Kearney also leads a group of re-searchers using biotechnology to engineer bacteria that destroy pesticides. The group has isolated and cloned a gene — that produces the enzyme parathlon hydrolase from a type of bacteria called a flavobacterium, increasing its ability to destroy pesti-

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November 17, 1986

### **CHLOROBENZENES**

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### Finland Eyes Continued from Page 3

the industry has kept during the past two vears. Federation estimates are for a modest percent growth in Finnish chemical production next year, up from 1.5 percent in 1986, but well below the 4.1 percent average

Last year saw total gross value of production by the Finnish chemical industry of about \$7 billion, according to federation figures, with chemicals, fertilizers, plastics and fibers accounting for 31 percent and oil refining products 45 percent. The industry accounts for about a 15 percent share of production by all Finnish industry and a 10 to 12 percent share of exports.

Value of chemical exports during 1985 was about \$2 billion with 37 percent going to European Community countries, 28 percent to the European Free Trade Association

overseas acquisitions, joint ventures and marketing agreements, but not at the pace 19 percent to East Europe and 18 percent t 19 percent to East Europe and 16 percent cluded a Canadian agreement whereby its

James R. Hickey, managing director of cluded a Canadian agreement whereby his cluded a

dentwoyears ago, Neste laid claim to second

NESTE VIEW OF PE

We are in the film business, wire and ca-

ble, pipe, extrusion coating and molding busi-

Consumption of low-density and linear

low-density for film uses in Western Europe

molding uses taking about 350,000 tons, ex-

Blow molding uses for high-density PE in

sales of close to \$1 billion in 1987. Total

Group turnover is about \$7 billion an

oncount a strong polypropylene effort to fill

that also includes

ir Vilnanen says that in addition to

tied an increase in ethylene production additional 200,000 tons to 230,000 tons annually.

npleted shortly. At the same time, debot-

Alistyrene and polyvinyl chloride units.

any claims 40 to 45 percent of the

the language we intend to be talking."

the years to come, but cautioned that the years to come, but cautioned that the are some pitfalls in traditional thicking.

With the chemical industry moving low: value added products, exports through tributors, agents or sales offices about the control of the years. At the same time, he admit to some inulti-product companies have some inulti-product companies have some broad range of products that they may be a critical saction of realing more rapid penetracal factor in achieving more r broad range of products that they make gress.

on agents and distributors at times.

With its acquisition of Unifos Kemi of Swe-

has moved into a "second phase" has place among Europe's polyethylene produc-ment strategy where companies are many place among Europe's polyethylene produc-key acculsitions of fooder companies are many place among Europe's polyethylene produckey acquisitions of foreign companies to to their core businesses or taking water positions in such companies.

Taking Kemira Filesch businesses with Himont Belgium BV under which Neste will acquire a 120,000-ton-a-

Taking Kemira, Finland's larged decided company, as an example, Mr. Interpolate out that during the four-year park from 1982 through 1985 the companyster furnover has approximately doubled to the billion, 60 percent of it coming from 64.

The transaction is expected to be complete for the end of this year. Plans call for engineering work to begin on a new 120,000-ton percent of it coming from 64.

Per plant at Next's "Scherland" technology.

Seas.

Hinont's "Spheripol" technology.

Acquisition of the former America: Mr. Viinanen says the focus of the global Cyanamid Company titanium dioxide plan polyethylene business is changing conat Savannah, Ga. in mid-1985 has been a stantly. He points out that whereas Europe exceptionally profitable acquisition solar still had more than 500,000 tons of PE exhe says, giving the company "a baselness ports last year, this year the total will be the largest titanium dioxide markets in: more like 350,000 tons and in the next decade world, the US." The US plant adds 80%, it's anticipated there will be very little, if 100,000 tons of the pigment to ken and the next decade it's anticipated there will be very little, if any, export from Europe.

80,000-ton domestic capacity at Port Meanwhile, in Saudi Arabia some 700,000 tons of capacity is already on stream and in Group in 1984 by Kemira's Tikkurilas: Canada 565,000 tons is on stream or under sidiary gave the group a strong position. Construction.

sidiary gave the group a strong position: construction UK coatings business and access to tel. The Neste executive estimates Far East ogy, while purchase of the Rozenberg: Projects add another 500,000 tons to the gen fertilizer complex of Esso Chemies: world lotal, although it is difficult to specify the Netherlands, also in '85, provided: the projects by company, he says. tion in ammonia, the one plant nutris: company has lacked in support of its 3: ion-ton fertilizer base.

KEMIRA PLANS AMMONIA Further, Kemira has plans for a 200,000-ton ammonia plant at the Hull?

low-density or high-density polyethylenes, but histead has looked at the business from BP Chemicals in the UK to be on street the Fall of 1988 and is converting and. ton ammonia plant at Oulu to peat at nesses," he says, adding that, "That is the material, also for completion in '88. language the customer is talking and that is While Kemira officials attending the ing were reluctant to detail the company

overall ammonia requirement, it's ka the firm is a net buyer of some 300,000+. is estimated at about 3 million tons, with annmonia annually, two-thirds of itime from the Soviet Union. Earlier possibilities for a world-scale

trusion coating 300,000, wire and cable 150,000 tons and all other uses 225,000 tons. monia plant in Finland, based on Sories bogged down when Kemira and Neste: Western Europe are believed to total about state-owned oil firm and pipeline open were unable to come to terms on gas par Like Kemira, Finnish Sugar Company other company with a sizable base at a counting for nearly 500,000 tons and pipe, other company with a sizable base at a counting for nearly 500,000 tons and pipe, other company with a sizable base at a counting for nearly 500,000 tons and pipe, other company with a sizable base at a counting for nearly 500,000 tons and pipe, other company with a sizable base at a counting for nearly 500,000 tons and pipe.

domestic market, has been building list? Mr. Viinanen told reporters in an interview national presence during the past the past Prior to the congress he expects Neste Chemports, Mr. Hickey told the meeting Twest of the company's international divisits been doubled over the past three year.

Unlike Kemira, however, the Fact division's most important products and Kalic polyethylene market now and expects

division's most important products and cialty, value-added materials such as sweeteners, sorbitol and fructose, sol

Clalty enzymes.

Acquisition of the Edward Medicial Providing an outlet for excess propylene pany in the US in 1984 brought Fine the company's 170,000-ton unit at Porfirm specializing in tabletting ald self we part of the rational for the move into PP wide variety of specialty sugars, agained att upoint was to stabilize the total thermo-

business for the Finnish parent.

Mr. Hickey also cites Priha On Polyethylene prices fell some 30 percent venture of Neste and Kemira producing the first half of 1986, although raw manual-formaldehyde resins for particle with prices dropped by at least the first half of the first h and specialty adhesives, as the type of all and specialty adhesives, as the type of all ance needed to penetrate for the special about 120,000 tons annually and is kets.

kets.

The company has been successful horizontally and is two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically stated to grow rapidly. Mr. Viinanen says ing two joint ventures in politically says ing two joint ve third largest producer of these adhesi

third largest producer of the US.

In other ventures, Orion Corporation saiable by April of 1988 and a doubling of licensed its NASH (nucleic acid said for the production of 1988 and a doubling of nology to E.L. do particular cumene to 140,000 tons will be

Nemours & Co. and the latter will market the technology will raise phenol capacity at the technology throughout the world, while Neste site to 75,000 tons per year. Neste's polybutene-1 project with Idemitsu is going ahead and pilot facilities will be built at both Porvoo and Chiba toward sodium chlorate in Western Europe, has conpossible construction of a commercial plant

by 1990, depending on results from the pilot Neste's plan to build a \$100 million methyl tert-butyl ether plant in the Soviet Union through its engineering affiliate is on track and may even have been speeded up by the fact that there are now possibilities for a joint venture project rather than the compensation agreement as originally conceived.

In another MTBE project, Neste has a 10 percent share in a 500,000-ton plant being Ilt by Saudi Basic Industries Corporation.

Sabic owns 70 percent of the venture and EniChem of Italy and Arab Petroleum Investment Corporation each hold shares of 10 percent. The facility is scheduled for 1988

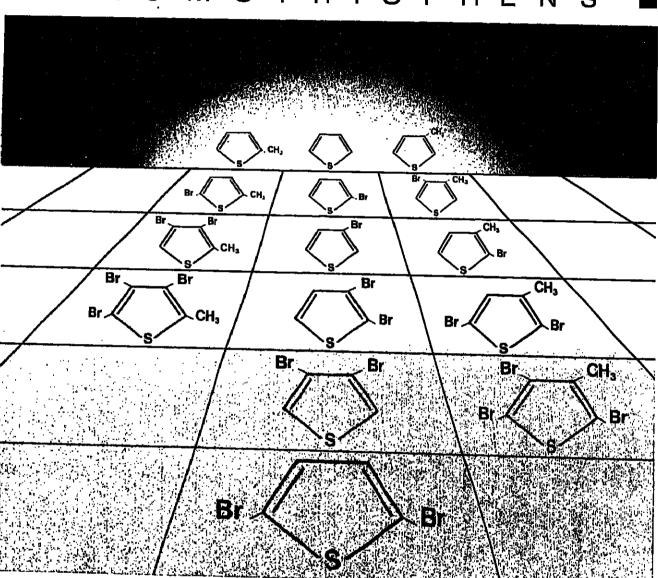
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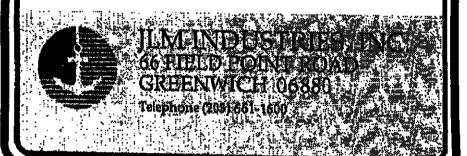
November 17, 1986

November 17, 1986

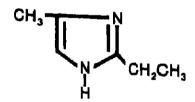
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### **Chemical Finance**

### USX Continuing Discussions With Would-Be Acquire

USX Corporation said it is continuing its discussions with Carl Icahn "in an ellont clarify his proposal to offer \$31 per share in cash for all of USX's common and conditioned on, among other things, the right to carry out a due diligence investigated USX added that there is no assurance that any agreement relating to Icaha's proper

USX also said that the previously announced restructuring study is proceeding at that First Boston Corporation and Goldman, Sachs & Co. will present various along. tives for review and evaluation toward the end of last week.

In another development, the Supreme Court has let stand a ruling that USX disciplant to the rule of th shareholders to get into the pro-rationing pool for the cash portion of the merger, the olelin plants has been extremely high, was unusually more generous than the securities exchange offer for the balancedt. In recent years, he says, the US has at

### **Vista Chemical Makes Its First Public Offering**

Vista Chemical Company, the privately held producer of polyvinyl chimies detergent chemicals which was once part of the Conoco Incorporated operation [1] DuPont de Nemours & Co., is planning to make an initial public offering of the shares of its common stock through an underwriting syndicate headed by EF Hall

Co. The initial public offering price is expected to be in the range of \$18 to \$10 price Proceeds will be used to redeem the company's outstanding special premius and log its curopean to be incurred to repurchase 3,705,000 common shares included.

The initial passive of the company's outstanding special premius and its curopean to be specially log its

### Pharmacia of Sweden Raises Income 21 Percent

Pharmacia AB, the biotechnology and pharmaceutical company based in Swela raised its net income 21 percent in the first nine months to 63 cents per America

#### Ferro Purchases Rosemar, Additive Supplier

Ferro Corporation, Cleveland, Ohio, has acquired Rosemar Industries, Inc. t pounds September 1, according to Tucker Schaumburg, Ill., a suburb of Chicago. Rosemar is a leading manufacturer of the Consulting Services, Dewey, Okla. colors and additives for plastics and operates plants in Schaumburg, Ill., and Place FALLING IMPORTS

Calif., near Los Angeles, Ferro said.

The acquisition of Rosemar will give Ferro a total color capability by the addized stocks have not been able to stem the liquid colors to the company's existing products and services, comprising pelletse butadene price slide. Prices have declined concentrates) and dry powder colorants, pre-colored resins and custom-color comparts all year, falling from a January high of 26 tents per pound to 9 cents at present. Most of

The Rosemar operations will become a unit of Ferro's Stryker Thermoplasticity sion, in Stryker, Ohio.

### Hoechst-Celanese Merger Gets Gov't Review Date

The Hart-Scott-Rodino waiting period under the Antitrust Improvements Adia nerger of Celanese Corporation and American Hoechst Corporation will expire all PM Eastern Standard Time on November 21, American Hoechst announced App and F. during the intervening period, the Justice Department can extend the period by Maing more information if it sees any antitrust conflict in the proposed merger.

Hoechst said the date was set after it made changes in certain Standard Industrial.

date previously furnished by that company to Federal Trade Commission and producers apparently are refusing to allow

### Standard Oil Gets \$5.5 Billion Credit Line

Standard Oil Company, Cleveland, Ohio, has accepted offers from 45 banks loss committed credit facilities totaling \$2 billion and uncommitted facilities another; \$3.5 billion. These lines of credit replace carrier committed facilities totaling! billion put in place last year and establish the uncommitted facilities for the first the new committed facilities for the first place.

The new committed facilities run for 7 years. The uncommitted facilities involve no fees or predetermined rates, amount to promises by the banks propage as a feedstock, a natural gas liquid reasonable endeavors to lend Standard Oil money, should it be needed. The terms of the land but a low but addence of the lend standard Oil money, should it be needed. The terms of the land but a low but addence of land but a low but a low

### Gulf Resources Proceeds With Tender Offer

Gulf Resources & Chemical Corporation, Boston, Mass., has mailed the olige decimal to the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Continental Gas is the previously announced cash offer for Imporial Contine

### Combustion Engineering Wins Syncrude Job

Combustion Engineering Simcon Incorporated has been selected to develops 3200" operating training simulator for Lummus Crest's "LC-Fining" process of Syncrude Canada Ltd.'s oil sands extraction facility at Fort McMurray, Alberta, Charles in the second of th

This is the second simulator project awarded by Syncrude to Simcon.

For this project, Simcon is supplying Syncrude with a full-scope process system, including design and engineering, hardware, proprietary software, training project management through site acceptance.

### ImmunoGenetic's Sales and Earnings Increase

netics, Vineland, N.J., said its revenues increased more \$4.9 million and its operating profits doubled for the quarter ended september reflecting the continued strength of its core business operations in poultry vectoring any phase and a strength of its core business operations in poultry vectoring any phase and a strength of its core business operations in poultry vectoring any phase and a strength of its core business operations in poultry vectoring any phase and a strength of its core business operations in poultry vectoring any phase and a strength of its core business operations in poultry vectoring and its core business operations are also become a supplication of the core business operations are also become a supplication of the core business operations are also become a supplication of the core business operations are also become a supplication of the core business operation of the core business operations are also become a supplication of the core business operations are also become a supplication of the core business operation of the core business of the core business operation of the core business of the core business operation of the core business of the core veterinary pharmaceuticals.

Net income for the quarter was \$282,419, or 4 cents per share, as com \$37,833, or one cent, in 1985.

### Sterling Drug Buying 2 Million of Its Shares

Sterling Drug Inc., has authorized the purchase of up to 2 million shared company's common stock, with the assistance of Morgan Stanley & Co. The shared used for various employee benefit programs and for other corporate purposes. Drug has 59 million shares outstanding.

### ALIPHATIC ORGANICS

### **Butadiene Takes**

trend to the sharp decline in exports this year. Co-cracking has become a neces-sity in Europe, Mr. Debreczeni says, be-

In recent years, he says, the US has absorbed ever 600 million pounds a year of European butadiene, while Japan has consumed up to 180 million pounds. However, the sharp fall in crude oil prices earlier this year prompted a large shift to heavy feedstock cracking at US olefins plants, thereby increasing output of butadiene. At the same time, Japan began accepting shipments of butadiene from Singapore and Korea, reduc-

rear, compared to almost 750 million pounds in the same period last year. This import decline outweighs the surge in US production this year, and is credited as the main cause for the domestic inventory decline. As of November 1, US butadiene stocks stood at 159 million pounds, down from 217 million

cents per pound to 9 cents at present. Most of the slide took place in the first half, when falling crude oil values precipitated a Jarge shift in US stream crackers to naphtha and gas oil feedslocks, thereby boosting butadiene output. Competitive pressures from imported material and domestic product kept pushing the price down through the Summer

Current indications in the market, however, suggest the slide has bottomed out. Mr. Debreczeni says the fourth quarter contract producers apparently are refusing to allow further deteriorations in contract selling prices. Hugh Pylant, of Houston-based Pace Mank says not much butadiene is curtently available for exchanges, forcing consumers to buy, rather than borrow, product. Sipplies have declined in the latter part of his year, he says, noting both the decrease in

In addition to a rise in propane cracking and a decline in gas oil cracking, US butadithe production has also declined due to C4,

and limited burning of butadiene for its fuel value, sources say. Furthermore, widespread C4 co-cracking in Europe has led not only to a decline in finished butadiene exports to the US, but also to a large decline in exports of crude C4 streams that are processed into butadiene in the US.

While the butadiene price may have reached bottom, several sources also note prices aren't likely to improve through the end of the year. The main factor here, sources say, is static-to-declining demand for the synthetic rubber product. Mr. Pylant says that while demand for styrene-butadiene la-

### **PRICES TRENDLINES**

WEEK ENDING NOV. 14, 1986

CHANGES/UP

CHANGES/DOWN

### **ALIPHATICS INDEX**

The Aliphatic Organics Index reflects the prices of 20 representative materials in this sector and the quantity of each produced in 1985

Chemical Prices Start on Pag	je 52
lov. 15, 1985	222.80
Oct. 17, 1986	222 80
lov. 7, 1986	222 80
lov. 14, 1986	222.80

tex and acrylonitrile-butationc-styrene resin has increased this year, domestic stryrenebutadiene rubber consumption has declined.

US styrene-butadiene rubber demand has been hurt in three ways this year, according to Mr. Debreczeni. First, tire imports to the US have increased by 5 percent, he estimates. Tire imports from Japan are on the rise, he says, even though the value of the yen has reached a post-war high against the dollar. In addition, low cost tires from Eastern Europe have also undercut US sales. Domestic SBR producers have also been hurt by high auto mports (which carry five tires), and rising rubber imports.

A further blow to butadiene demand has come from a six-week turnaround recently taken at Goodyear's large Beaumont, Tex. polybutadiene facility.

Thus while butadiene supplies will be held in check, due to fewer imports, and increased domestic use of propane as a feedstock, demand will remain weak into 1987, and little hope is seen in the immediate future for firmer butadiene prices.

GLYCERINE - Production of crude glycerine, including synthetic, totalled 22.3 mil-

<u>an kan</u>ara dan Kabupatèn Kabupatèn

BUREAU OF CENSUS FIGURES FOR THE KEY ALIPHATICS

la	0.000		****		_
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Acetic ambusta	QUANTITY	\$ VALUE*	QUANTITY	\$ VALUE	
Acetic sold	30,197	19,378	8,929,272	1,288,616	
		~	1.453	6,730	
VIVAL	37,569,312	4,297,981	12,032,279	1,792,120	
Auroni be.  Cioroscotic acid libe.  Egenol (Industrian libe.	38,956	22,762	1,162	3.090	
Enter (Industries)	3,174,161	957,603	2,493,220		
Oicroscetic acid lbs.  Fauno (Industrial) lbs.  Chanciamine gais.  Carl acrysta lbs.	23,855,838			902,024	
	444 404	145,471,403	17,607,398	14,032,676	
	141,124	38,778	86,199	39,423	
Coming action					
Ethylane dycol ibs. Ethylane glycol ibs. Gyozal ibs. Gyozal ibs.	13,245,806	2,381,321	46,807,076	8,427,735	
region of the state of the stat	1,133,408	195,595	1,316,410	255,988	
Grozal ibs.  Grozal ibs.  Isamethylenetetramine ibs.	2,452,212	747,937	17,824	7,382	
leannethylenetetramine. ibs. Lect acid ibs. Lect acid ibs. Lectano ibs.	50.398	14.826	156,548	65,748	
Section ibs.  Settlene chloride gale.  Settlene chloride ibs.  Settlene ibs.  Settlene ibs.  Settlene ibs.	1,234,474	608,649	970,977	559.982	
Surfriene chloride gale. Surfriene chloride gale. Surfriently Letane ibs. Octanol Pyrrolidone ibs.	28,811,402	6,295,706	28,596,796	859,032	
Skrijvi 2 pyrolidone ibs. Skrijvi 2 pyrolidone ibs. Otale acid ibs.	3,357,900	617,613	2,613,960	495,223	
Octanol. Ibs. Octanol. Ibs. Otafic acid. Ibs. Onafic acid. Ibs. Onafic acid. Ibs. Onafic acid. Ibs. Onafic acid. Ibs.	3,336,538			700,440	
Outre and the line	01000 <sup>1</sup> 000	812,901	6,487,372	988,423	
Panta acid	33,510	19,622	35,637	48,654	
Plant VIII II O and at many	1 100 500		1,098,449	278,614	
Don't USUN IN THE STATE OF THE	1,198,523	270,748	1,5426,957	450,630	
So. 64 and Oxide	903,862	427,263	1,518,455	752,236	
Table 10 Cold Cold Cold Cold Cold Cold Cold Cold	10,884,816	1,554,787	8,724,454	1,360,917	
Tidata My 1884	2,472,120	928,773	2,625,220	962,663	
No "Vermina"	352,932	558,159	284,036	801,137	•
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inchloroeihylead ibs.  inchloroeihyleae ibs.  ingri acuses, unpolymerized ibs.  ingri pyrrokales ibs.  illus.	1,578,008	276,465	1.125,860	197,643	
Agust Agus de ips.	193.367	37,948	163	1.659	
ingurea representation	131.704	310 663	185,989	645,600	
C.I.F. velues: custo	oma Š value al	ua fraisht iseu		0.101000	
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lion pounds in September, according to Commerce Department. That represents a decrease of 2.9 million pounds from August and 2.5 million pounds from September 1985.

**ALIPHATICS** 

Producer stocks of crude and refined glycerine stood at 48.6 million pounds, up 10 million pounds from August, and up 22.4 million pounds from the September 1985 level.

Glycerine imports amounted to 8.6 million shifted MTBE "from a weak 64c." (1814) lon) to a strong 64c." one product Without the increase in toluene when pounds in September, compared to 6.1 million pounds in August and 2.3 million pounds In September 1985.

At the end of September, cumulative imports were 47.6 million pounds, compared to 26.8 million pounds for the same period last

At 1.6 million pounds, exports in September were up from the August level of 1.3 million pounds, but down from the September 1985 level of 2.6 million pounds. Cumulative exports through September stand at 12.7 million pounds, much less than the 22.8 mil-

#### lion pounds for the same period lasty Diagnostics Market Total domestic disappearance was 19.3 million pounds in Sept

lion-pound-level through September

gallon surge in toluene prices las

explains, MTBE prices would have the But now, he says, MTBE is in a more

However, another octane entire

ethanol, continued its steep price decisal

October. Fuel ethanol prices plugelk

gallon in October to a 79 cent per gi

average, according to Information.
sources, Inc., a Washington-based mains
search firm. And this decline follows!

per gallon slide in September, Risup.

per gallon to 79c., IRI says, blamball

cline on oversupply.
VINYL CHLORIDE MONOMES - 1

dustry sources say a successful in

mented polyvinyl chloride price increase month is leading to price firming in the pri

One producer says PVC processed in per pound this month, and a

process VCM makers are realizing a key pound gain in selling values. This later gain raises VCM market prices to like

16 /2 c. per pound. Furthermore, PVC 📢

ers are planning another price like

cember. If the PVC makers pass thisk:

on, sources say VCM prices are like:

Demand for VCM in the US vinylmin

making the monomer scarce in the

market. One producer says shortige: cropped up in the export market?

company has had to turn away the

buyers in recent weeks.

ther increase.

from the revised August total of 20 (2) from the revised August total of All to pounds. Year-to-date domestic diagra ance amounts to 254 million pounds it. September, and increase over the 2112 nanufacturers will only have a short time to capitalize on these changes.

"Once laboratory systems are established in physicians offices, it will be difficult for competitors to displace them. In addition, manufacturers will find that the successful MTBE — Rising toluene prices last have contributed to a slight findly methyl-tert butyl ether prices. The ky direct sales force approach which was succassul in the highly concentrated hospital market will not be economically feasible in the more diffuse physicians' offices."

In the over-the-counter diagnostics market USsales are likely to increase 21 percent a year, from \$235 million in 1985 to \$610 million in 1990.

"The reason for this," says Mr. Rosenbaum, "is the consumer's desire to save time and money, as well as ensure privacy and personal control over health management."
"The real opportunity in over-the-counter diagnostics exists for companies that are di-versified and have both the ability to develop the products, and sell in consumer markets,"

"If you have the ability to market and sell products at the retail level, the technological ability can be acquired. The success factor will be the ability to stimulate and supply demand in the appropriate market segment. Companies that invest early in establishing brand loyalty will be well positioned to sup-port new OTC product introductions," he

While the market for clinical diagnostics remains competitive, and competition from abroad is intensifying, the A.D. Little analyst expects that some manufacturers will begin to consolidate in the next few years.

Technology development is a primary basis for competition in this industry, and R&D is a major focus for participants because of both intense competition and increased cus tomer demand for cost-effectiveness," Mr. Rosenbaum says.

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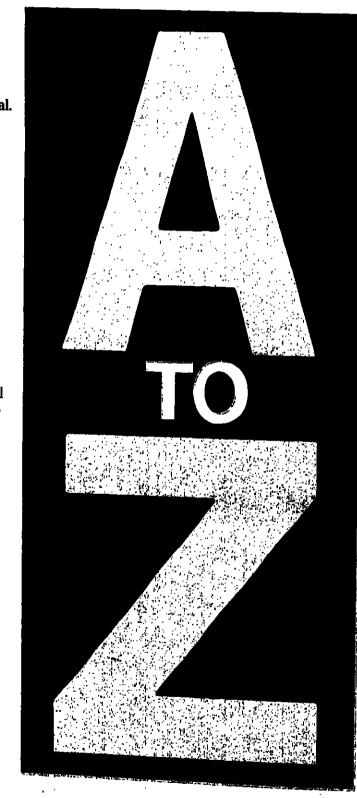
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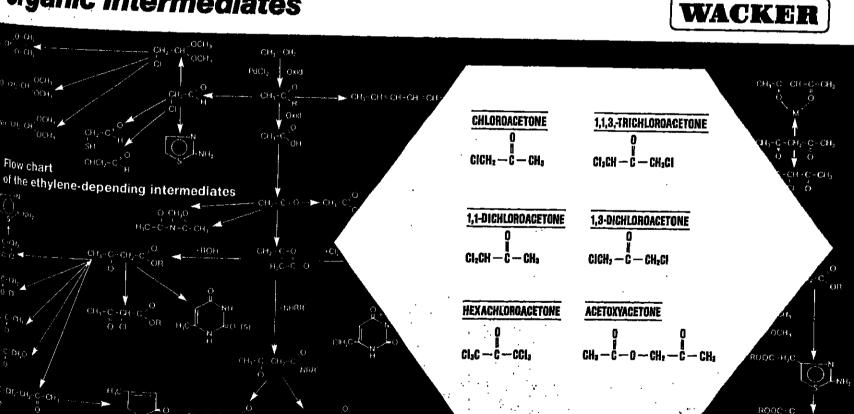
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Federal Energy Regulatory Commission says it will investigate to determine whether natural gas pipelines are using unregulated affiliates to dominate the

By a four-to-one vote, FERC asked for public comment on whether interstate pipelines are abusing their power in the wellhead market for gas. The commission has been attempting to open the market to all buyers and

Public comment will be due by Dec. 29, and any comments in reply would be due by January 28. A final vote will be taken on a finished order drafted by the FERC staff.

The commission also voted 4-1 to stop proceedings by an administrative law judge on a complaint by Champlin Petroleum, an affiliate of the Union Pacific Railroad. Champlin Petroleum has charged that Tenngasco, a marketing division of Tenneco Corp.'s Tennessee Gas Transmission Company, could receive unfair advantages in shipping gas.

Charles Trabant, the dissenter in both votes, said he feared FERC would not be able to act before July, and by then marketing affiliates "can be expected to increasingly dominate natural gas transportation and, un-less I'm wrong and I hope I am, exercise

unregulated monopoly power."

The pipelines had monopoly power until
October 1985, when FERC, prodded by a Federal court order, gave pipelines the option of ecoming pure transportation companies ather than gas wholesalers.

A pipeline operating under the open access option simply carries gas. The pipelines' customers, local distribution companies regulated by the states and large industries, buy gas from the operator and have it shipped to

the burner. Most of the nation's gasing, the burner. Most of the nation a gash and in this manner, compared with only a mid percentage just over one year ag. National that is shipped by new pipeline markly affiliates who buy gas and resell it. Sone is a customer while some in the customer while some in t chemical blend because when they make concoinsie, they remove water and some of the flavor chemicals from the juice. Some of the pice water, called "essence," is added back is shipped by customers, while some is shipped by more than 50 independent to along with other ingredients, partially restoring the flavor. Mr. Trabandt proposed an emergency us ultion to prevent pipelines from giving the

Chemicals Act

Agriculture scientist has broken for the

USDA's Manuel G. Moshonas has identified

what he says are the 21 major chemicals the

contribute heavily to fresh orange juke in

tinctive flavor. That natural blend of them-

cals is altered when the juice is stored to

"We found that the 21 chemicals ad as

"We're closing in on nature's way of making orange juice," sald Mr. Mothonas, a chemist with USDA's Agricultural Researd

Service in Winter Haven, Fla. He said le

plans to see if he can detect the flavorings dients in other juices such as apple, pineagi-

All 21 flavor chemicals were identified:

orange juice known in the industry as "side

strength," which includes juice that is ite?

squeezed, juice that is pasteurized and pai

aged in cartons or bottles, and juice com-

trate to which flavor ingredients and well

What happens is that processors aller,

flavor code that will help the citrus interior

make processed juice that tastes likely is been squeezed from an orange," he sald

processed, he said.

restoring the Havor.

Still, the reconstituted juice does not have the same flavor it had when it came out of the orange, says Mr. Moshonas, who is based at the agency's Citrus and Subtropical Products

or oranges product converted to provide the same flavor it had when it came out of the value of more was used to be same flavor.

affiliates discounts on shipping charges i require all gas shipped by marketing and ates to come under price controls. Until now, scientists had not been able to brest the flavor code because the chemicals are in low concentrations, and the water and other components of the juice — sugars and acids, for example — make it hard for most As Flavor Code Instruments to measure the flavor ingredi-

Orange juice has a "flavor code" d chemicals that a U.S. Department d Mr. Moshonas used a gas chromatograph to compare fresh juice with concentrate and to determine which flavor components have changed He said the citrus industry is interested in his research and that the chromalograph, which costs between \$5,000 and 18,000, would be economically feasible for

> He also used low pressure and temperature to distill, or separate, the water and clished, he could then analyze the flavor by of its own.

using the gas chromatograph, which "separates and measures these ingredients so we get a picture of them and how they interact,'

About 90 percent of the 200 million boxes of oranges produced in the US each year are converted to processed products with a retail value of more than \$3 billion, according to May 1986 figures from the Florida Depart-

### Vista Selling Shares

Continued from Page 9

through a management-led leveraged buyout, was initially capitalized with about 90 percent debt and 10 percent equity.

Most of the equity portion of the capital again about 90 percent — was initially in the hands of the financial backers including Hutton, while the managers held about 10 per-

The company's strategic plan was to pay back the debt rapidly, achieving a more normal 50 percent debt-capitalization ratio in five years or less. In an interview last year, company president John Burns said that when the debt is substantially paid down, flavor components in juice from the solids Vista will either re-leverage itself, go public, dissolved in the juice. Once that was accombe acquired or make a substantial acquisition

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DRUGS & FINE CHEMICALS

### Two Hike Sorbates Price Following Increases by Mitsui Indian Gum Industries is said to be the largest producer of guar gum products in ladia, with manufacturing facilities in Bomlada, with manufacturing facilities in Bomlada, with manufacturing facilities in Bomlada, Ahmedabad and Jodhpur. The company says its annual production of these products with an 12 000 metric tons. Indian Gum

Both Kanematsu-Gosho, distributor for Jeno Fine Chemicals, Inc.; and Toyomenka (America) Inc., are raising their list prices for potassium sorbate and sorbic acid. Each company will be charging \$2.50 per pound for 20,000-pound or larger quantities, \$2.60 per pound for between 10,000 and 19,900 pounds. and \$2.70 per pound for between 3,900 and 9,900 pounds. Their prices differ slightly for lower quantities.

These announcements come on the heels of an announcement made by Mitsui & Company (CMR, 11/10/86, pg. 21). Mitsul's changes are similar, and also take effect De-

In most cases, prices are rising by 30 cents per pound. Much of the US sorbates supply is mported from Japan and Germany, and currency rates are being cited as the primary reason for the hikes. The three companies which have announced increases thus far sell

Japanese material. The industry still awaits the decision of ther important players, namely the domestic producer Monsanto Company and the im-

porter American Hoechst. MONSANTO MULLS MARKET

A Monsanto spokesman says his company is evaluating market conditions, and will soon decide whether it will raise its prices also. An American Hoechst spokesman com-ments, "Present pricing for (sorbates) is unsatisfactory."

One company spokesman thinks that, in order for the price increase to hold, both Monsanto and American Hoechst have to raise their prices. "If they don't," he says,

Another player, however, says that the price increase should hold even if the two companies do not follow suit, because of the strong need for higher prices.

Prices have been depressed, say sources, because of oversupply. One source estimates world capacity at 60 million pounds, but says that no more than 40 to 50 million pounds are being sold. Sources assert that Monsanto decreased its prices in early 1985 because of the oversupply, and say other suppliers were forced to follow.

Now, because of the currency situation, sources say profit levels are unacceptable. One source says, "We've had enough of the (price) war...We feel the pinch." Another source comments, "Price really fell last year .. Profit margins were low."

Reflecting the currency exchange situa-tion, imports have fallen in 1986 for both potassium sorbate and sorbic acid. Particularly, imports from West Germany have

US market that currency exchange rates: not affect the flow of sorbates from Japan much as demand shifts

Through September 1986, about 38mg pounds of potassium sorbate enteredibely almost 22 percent less than the 4.9 min

### PRICES TRENDLINES WEEK ENDING NOV. 14, 1986

CHANGES/UP

CHANGES/DOWN

### **DRUGS INDEX**

The Drugs & Fine Chemicals index reflects the prices of 10 representative materials in this sector and the quantity of each produced in 1985.

Nov. 14, 1986 Nov. 7, 1986 Oct. 17, 1986 Nov. 14, 1985

Chemical Prices Start on Page 52

pounds coming here through Septer 985. Material from Japan totalled 21c. lion pounds, about a 7 percent decrease terial from West Germany, however, kt. 1.4 million pounds, more than 30 percest! that the amount coming here through: tember 1985. Belgium sends a relate small amount of potassium sorbatelotte: and that amount nosedived by 58 peressi 42,000 pounds, through September.

Overall sorbic acid imports are to about 7 percent (3.8 million pounds versi million pounds). Japan's shipments tollthrough September remained stables about 3.3 million pounds. West Germi exports here were 457,000 pounds, a deciof 47 percent from last year. Mainland ( sent 79,000 pounds to the US through Set ber. Last year it sent nothing.

US demand for sorbates is estimated million pounds by one source. Others to the total is slightly lower. Growth is being 3 and 5 percent annually. One source tions good sales of semi-moist pel foots demand booster.

Several sources agree that the istant will have to wait until mid- or late January order to assess the effects of the pater creases, and to determine whether make creases will be necessary.

GUAR GUM - Indian Gum Iste

### fallen considerably. Presumably, the GUAR GUM — Indian Gum Bombay, India, has applied. DRUG & FINE CHEMICAL EXPORTS: SEPTEMBER

BUREAU OF CENSUS FIGURES ON THE KEY DRUGS.

			MBER	QUANTITY	ÇŅ.
	Antibiotics:	QUANTITY	\$ VALUE	GNAMINI	
	Ampicillin and salts, bulk	5,541 68,790 7,374,186 143,243 1,236 274,006 35,300 566,935	747,896 8,006,974 1,219,834 2,868,021 1,456,411 388,162 130,805 927,655	238,866 7,73,160 1,899,125 4,931 3,2966 234,615 64,062 435,866	881 180 831 391 391 211 211 221
	Hormones: Ibs. Corticosteroids, napf , ibs. Nonsteroid hormones , ibs. Prednisolone and estera salts , ibs. Stieroid hormones and synthetic , ibs. Stifonamides, bulk , ibs. Vitamins: , ibs.	301,532 592 3,112 16,852 3,342 22,382 102,612	89,329 6,465,273 1,203,298 4,131,290 2,113,865 1,424,252	10,484 4, 8,429 1, 4,508 4, 126,918 4, 78,487 1,	681 681 581 181 181 181
	Ascorbic Acid ba. Vilamin A and Pro-vitamin A, bulk bs. Vilamin B, (thiamina) bs. Vitamin B 12 bs. Vitamin B 12 bs. D and DI pantethonic acid bs. Niscin and niscinsmide bs. Vitamins, napf bs.	194,684 160,281 5,984 1,054 68,110 2,848 46,935 395,096	668,499 207,658 52,164 26,534 1,127,744 22,452 149,640	51,168 78,320 2,832 4,184 52,603 4,591 20,549 232,298	一門的に関いたと
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### DRUGS & FINE CHEMS

pointed Commodity Services International, inc., as its exclusive sales, marketing and distribution agent for guar gum and its derivatives in the US. Commodity Services international is located in Easton. Md.

is more than 12,000 metric tons. Indian Gum Industries is affiliated with Hercules Incor-

Guar gum supplies have dwindled this year, because of last Fall's poor crop in India and Pakistan, the world's largest producers. This season's crop will not see any improvements, according to a supplier.

Guargum's crop is beginning to peak about now. Estimates of the crop's potential range from 41,000 tons to 68,600 tons, far below the average crop of about 137,000 tons. Last sear's crop yielded 68,000 tons, so at best this gear's crop would equal that total.

The only factor preventing a catastrophic thorisge, the supplier says, is the "unbelievable petroleum disaster, (CMR, 8/11/86, pg. 19)." He claims that the past year has seen the petroleum industry's great demand plummet to 600 metric tons, from 4,500 met-

VITAMIN B-6 - A recently completed study by USDA Agricultural Research Service and Columbia University scientists indicates that vitamin B-6 helps ease some symptoms of bronchial asthma. For example B-6 is now thought to help control short-

Dr. Robert D. Reynolds, a chemist for ARS who was involved in the research, says that during the two-year study, 15 asthma patients were given 100-milligram doses of vi-tanin B-8 daily. He claims that initial resolis show a relationship between low levels of vitamin B-6 and asthma, and that all involved in the study have experienced fewer and less severe as thma attacks.

Dr. Reynolds cautions that 1.5 to 2 milligrams per day of vitamin B-6 is the normal intake, and that excessively high doses can cause serious nerve damage.

Meanwhile, the vitamin's price has re-



Chemistry Exclusively

cently been increased by soveral major com-

panies (CMR, 11/10/86, pg. 21).

BRUCINE SULFATE — Reportedly, the

Indian government is considering raising the price floor of brucine sulfate.

The current price floor of the Indian import is \$2 per ounce, f.o.b. Indian ports. The floor was established to encourage farmers to grow the nux vomica plant, from which brucine sulfate is extracted. Before the floor, farmers complained about high production

Now, the floor may be raised again for similar reasons. An importer of the product says that talks have taken place recently, but adds that no change has been made. In the meantime, the importer claims that some suppliers have been squeezed out of the market because of low returns.

The seiling price of brucine sulfate is between \$2.25 and \$2.30 per ounce, for large quantities. US demand is estimated at about 400,000 ounces a year, and is said to constitute the bulk of world demand.

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#### CHEMICAL INTERMEDIATES

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- 2,3-dihdroxybenzoic acid
- 5-allyl barbituric acid
- 5-allyl-5-(2-bromoallyl) barbituric acid
   1-2 ethanedisulfonic acid dihydrate

- 2-(2-chloroethoxy) ethanol
- 2-(2-(2 chloroethoxy)ethoxy) ethanol 4-morpholino-2-butanol
- 2-(2-diethylaminoethoxy) ethanol (2-chlorophenyl) ohenylmethanol

#### AMMONIUM COMPOUNDS

Triethylbenzylammonium chloride

#### BROMIDES

- 2-3-dibromopropene
- 1-4-dibromobulane
- 1-(bromemethyl)-2-methylbenzene 1-(bromemethyl)-3-methylbenzene 1-(bromomethyl)-4-tert-butylbenzend

- 1-(chloromethyl)-2-methylbenzene 1-phenylcyclopentanecarbonyl chiorkie
- 4-phenyitetrahydropyrane carbonyl chloride 10-(1-chloro-2-methylpropyl)
- (p-chlorphanyl) phenyl chloromethane

 1-phenyi-1-cyano-cyclopentane 4-phanyi-4-cyano-tetrahydropyrane

#### PIPERAZINES

- 1-(2-(2-hydroxyethoxy)ethyl) piperazine
- 1-phenylpiperazine
- 1(2-methylbenzyl) piperazine 1-(4-chlorophenyl, phanyl, methyl) piperazine

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### Insects Pests Targetted Continued from Page 1 nals in that part of the insect's brain which

German Chemicals

will be making an important contribution

the growth of the overall economy.

He sees some clouds on the horizon, here

ever, notably in the US, which has not bee

economically stimulated by the declined

dollar. Among other problems, he cleate massive budget deficit.

"Also, the economic situation of Japan

especially insecure today," he says. Negain:

influences on exports and weak overall b

It's true that West Europe is not as direct

German Chemical Output

January-August 1985 1986

2,372,623 2,321,698 - 2

2,309,838 2,252,425 - 25

1,306,278 1,135,629 -13

2,125,015 1,828,675 -139

384,348 321,963 -162

902,874 895,033 4

10,515,545\*\* 10,266,187 -{!|

865,192 +0

825,917 +16

780,575

326,693

112,752

860,525

812,636

Source: Verband der Chemischem Industry

\*Figures are tons except where indicated otherwise

strongly export-oriented" an indusing

German chemicals "can't look unaffected;

the impact on the growth of the world en

In other remarks to the VCI press could

ence Dr. Albers expressed concern over

rising chorus of environmentalist calls?

Germany for more regulation of the char-

industry and the need to reduce business taxes in line with those on other majorini ing partners. He sees a "long-term dangs," if current business taxes go beyond today level at 70 percent of profits or higher.

affected by US economic weakness and the

devaluation of the dollar as Japan, "but

Sulforic Acid (SO<sub>3</sub>)

Fertilizers (N)

Fertifizers (P2O5)

Polyethylene Polyvinylchloride

Fungicides, Herbicide

Paint Material, lacquers

vestment level are strengthening recent

tendencies in that country, he warms.

Continued from Page 5

als in that part of the insect's brain which ontrols the release of needed hormones rom the insect's glands.

Methoprene stops an insect's maturation Methoprene stops an insect's maturation of the insect at disruptive time!

Can the genetic codes of such pathogens altered to enable them to produce neurolations and provents it from controls the release of needed hormones from the insect's glands. process in mid-stride and prevents it from

propagating. Again, methoprene disrupts the nsect's specific hormonal system. The action of both chemicals is fundamentally different from conventional insecti-

cides because death results from more subtle actions on behavior or development. Dr. Adams explains how the insect brain

works: "In insects, the brain is a central command post which programs developmental, reproductive, metabolic and behavioral states at the appropriate times throughout the body. The brain does this by issuing chemical messages called neurohormones from specific nerve cells, which, in turn, orchestrate the precisely timed liberation of blood-

borne hormones from glands." The activities controlled by these hormones—such as changing from larvae to an adult form—are unique to Insects.

"By focusing on insect-specific neurohormones, Dr. Adams says, "it is hoped the problems of general toxicity to non-target organisms will be avoided.'

Today's conventional crop protection insecticides are neurotoxins, Dr. Adams says, and these are designed to upset the delicate regulation of neurotransmitters within the

"Unfortunately," he says, "they are general toxins affecting brain chemicals common also to non-target organisms, hence the high risk associated with their use."

While recent improvements in the design of conventional insecticides have lessened this risk, Dr. Adams says, the goal of future insecticide research is to focus on those aspects of insect life that are unique to insects. This would increase the margin of safety for non-target animals.

But getting mind-tinkering chemicals into the insects can be a problem, says Dr. Adams. Their tough outer shells pose a formidable barrier for some promising insecticides to penetrate.

Dr. Adams says one solution would be to have a disease-causing agent deliver the pesticide. The agent would attack only insects, and would deliver a neurohormone at just the wrong time in an insect's life cycle-for instance, interrupting an insect's molting process at its most vulnerable stage, when its new outer shell has not yet hardened

Dr., Adams says both bacterial and viral disease-causing agents, pathogens, already are being used with some success in insect

### **Waste Cleanup:** Labor Seeking An Interim Rule

Occupational Safety & Health Administration should issue a comprehensive interim standard to protect all workers involved in hazardous waste cleanup operations, organized labor said last week. The superfund reauthorization bill signed into law by President Reagan October 17. requires OSHA to issue an interim rule by December 17 and a final rule within a year. OSHA says it will issue the interim rule by the mandated deadline and simultaneously

subject to public comment. AFL-CIO safety specialist Margaret Seminario calls passage of the superfund bill a "real victory for the labor movement" and says organized labor is "glad to see OSHA moving forward on this."

issued a proposed final rule, which will be

She emphasizes however that workers need a "comprehensive rule that protects all vorkera in hazardous waste sites." Ms. Seminatio notes that superfund is "very specific" about who should be covered.

"The Intent of Congress is clear in the language and in previous testimony that all worker at hazardous waste operations be covered," she says. "This goes beyond just workers at the superfund cleanup sites. Some of the most hazardous sites for workers are at managed sites where waste chemicals are undled processed or buried." Ms. Seminario

She says OSHA's proposed standard should setspecific exposure limits for the chemicals

that workers may be exposed to in waste operations, using both short-term limits and permissible exposure levels averaged over a workday when both are needed

"It will depend on the type of operation and the chemicals involved," she explains.

Superfund also authorized the National Institute of Environmental Health Sciences to fund university-based programs on healtheffects research and on worker training.

Ms. Seminario says the NIEHS training program and the OSHA standard on toxic waste sites are interrelated, and adds she hopes the training programs developed are consistent with the OSHA requirements.

A key to the effectiveness of the NIEHS worker training program will be making sure Environmental Protection Agency earmarks the \$10 million per year required to fund the operation, she says.

### **Borg-Warner's Unit**

Continued from Page 9

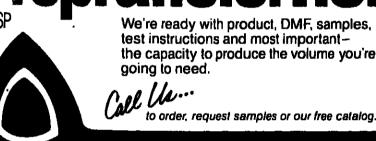
the large amount of capital employed in the financial operation for growing other Borg-Warner businesses, according to Clarence E. Johnson, president and chief executive offi-

cer.
First Boston Corporation, which was retained by Borg-Warner in 1984 to advise it on restructuring, will assist in the sale of the financial operation, Mr. Johnson stated.

This is the second planned divestment announced by Borg-Warner within a month. On October 27, the company said it intends to sell its industrial products subsidiary, which had sales of \$273 million in 1985.

Proceeds from both sales will be available for expanding other businesses, for acquiring companies that blend with the company's mainstream operations and for repurchasing

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### **EDB Ban Poses**

Continued from Page 7

ban further shipments. A Federal court is Kansas on November 5 approved an arrast ment allowing EPA to store the rest of Vil can's inventory until a recycling system by

comes operational next September.
As a result of the problem at Vilials warehouse, Mr. Campt said the agent advising all EDB holders to inspect in drums for leaks.

But documents released at the hearing Rep. Mike Synar (D-Okla.), subcommitted that EPA was a sure chairman, indicated that EPA was a sure corroded or leaking drums as far had 1984 at warehouses in three other states. EPA officials now estimate that as most

as 50 percent of the remaining stocks of Eli may have leaked.

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### **Supreme Court**

Continued from Page 7

deformities in Katle Wells, including a deformed right hand, no left arm and partial development of her left shoulder.

The judge awarded her parents \$5.1 million for medical expenses, pain and suffering and lost wages. In May 1986, an appeals court upheld the judge's finding but reduced the award to \$4.7 million.

Appealing to the high court, attorneys for the drug company said the trial judge and the appeals court used an improper standard for evaluating evidence in a scientific case. They said objective data fail to establish any clear link between spermicides and birth defects.

"With the exception of the plaintiffs' experts in this case, no scientist has ever publicly expressed the opinion that vaginal spermicides cause birth defects," the appeal said.

Opposing the appeal, lawyers for the child and her parents accused Ortho Pharmaceuticals of seeking to "re-try the merits of its case." They said Ortho " has had its day in court" and lost after "a procedurally perfect

Following a two-week trial in which both sides presented expert witnesses, Judge Shoob ruled in favor of Katie Wells' parents. He said they presented "competent and credible" medical evidence that showed "to a reasonable degree of certainty" the spermicide caused the defects and that the pharmaceutical company was negligent for not warning of the danger.

Thirteen studies were entered in evidence during the trial and two of them were singled out by the judge as demonstrating an associa-tion between spermicide and birth defects.

The case has prompted concern in the pharmaceutical industry and debate within the medical community over standards to be used by judges considering medical evidence. Recently, Drs. James Mills and Duane

Alexander of the National Institute of Child Health and Human Development said it demonstrates that lawsuits can be won with evidence rejected by the scientific com

nity.
The pair, writing in the New England in mal of Medicine, said, the decision "look to medical community by surprise because to overwhelming body of evidence indicate that spermicides are not" the cause of birth

### Water Act Veto Hit

Continued from Page 4

mously in favor of the bill, which would have extended terms of the Clean Water And through 1994 by providing money for lost sewage treatment and initiating programm curb toxic chemical pollution.

Sen. Daniel Moynihan (D: Y.), said he dent Reagan's signature on the bill passe the final days of the 99th Congress not have been seen as a "first gesture of coopertion" with the Democratic leadership dis chambers when the 100th Congress comes

Sen. Edward Kennedy (D-Mass.), was more blunt. "The President's veto of the clean management of the cl ter bill was an irresponsible act. We will w allow these projects to be delayed for log' Sen. Kennedy warned. "We will be become year and we intend to prevail with a simile

President Reagan promised to work with the new Congress in addressing and tocerns, saying the bill he vetoed would have authorized certain new programs for \$500 million "that my administration has op-

Among them, he said, is "reinstatement a Federal assistance program to pay for b cal plans to control diffuse sources of pile

President Reagan, who reported "remain able progress in the massive nation." cleanup effort," said the bill's \$18 bills price tag was triple the amount he request

The chemical industry regarded theka lation as an acceptable compromised urged the President to sign it into law.

### **Biotech Center** Is on the Way

Officials last week broke ground for the nation's first biotechnology research

center at Rockville, Md.
Construction for the Center for Advanced
Research in Biotechnology in Rockville formally began with ceremonies involving representatives of the major participating insti-tutions. The center — established by the Uni-versity of Maryland, the Department of Commerce's National Bureau of Standards and Mostgomery County, Md. — will be located at the county's Shady Grove Life Sciences Center. Biotechnology companies are ex-pected to join in CARB's research, a

"This center represents a unique national resource in an especially important scientific field that will also strengthen the biotechnology-related programs of NBG and our university," said John S. Toll, president of the University of Maryland, in ceremonies at NBS to celebrate the groundbreaking.

Associate deputy secretary of commerce Mark Policinski emphasized the economic mportance of biotechnology. "The more than 400 biotechnology firms which have emerged over the past few years attest to the promise this field holds," he said. "But we must continue our strong research support for biolechnology and find better ways to transfer research advances to the many small and large firms which make up this

Ernest Ambler, director of the National

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benefit expected from CARB. "This nation must increasingly turn its attention to cooperative ventures like CARB in order to make the most of our national investment in rescarch and development," he said. NBS, the Federal government's science and engineering measurement laboratory, provides industry and science with physical and chemical measurement methods, data, and standards.

First announced in 1984, CARB now is putting together multidisciplinary teams of scientists and engineers with state-of-the-art facilities, according to Kevin M. Ulmer, director of the center. The organization has been housed at NBS, where researchers from the burger and the University of Merchanizary and the University of Merchani the bureau and the University of Maryland have undertaken several research projects taking advantage of specialized NBS labora-

When the new CARB building is ready in December 1987, it is expected to accomodate 100 researchers. Between 65 and 90 scientists from NBS and the University of Marylandwill work at the land will work at the new site. The remainder of the 100 researchers working at the center will be guest scientists and engineers from industry, other universities, and government agencies. Up to one-third of CARB's research staff will be visiting industrial fellows. Both cooperative and proprietary research will be possible at CARB.

The initial 40,000 square-foot complex under construction "will be the world's finest facility for the determination and analysis of the structure of macromolecules," Mr. Ulmer said. "Our goal is to radically reduce the time and effort required to determine the atomic structure of proteins and to model and predict their properties," he said.

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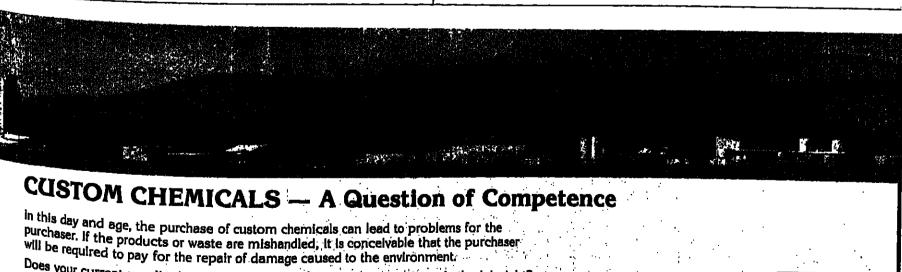
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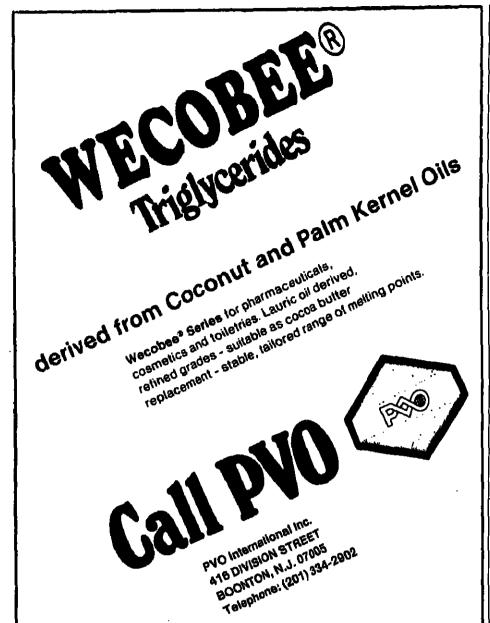


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Fertilizer Shipments Continued from Page 5

solid urea remained unchanged from last

Ammonium sulfate exports advanced 135 percent for the period, followed by ammunium nitrate with a 12-percent rise. Anhydrous ammonia and urea exports were off 28 percent and 39 percent, respectively.

Processed phosphate disappearance declined 4 percent in September compared to September 1985, but rose 3 percent for the three-month comparison. Superphosphoric acid disappearance for the same period was off 34 percent and concentrated superphosphate shipments fell 16 percent, while monoammonium phosphate disappearance rose 25 percent.

Production for the month was up 7 percent compared to September 1985 but off 7 percent for the period. Year-to-date figures show that production dropped for all phosphate products except normal superphosphate, which remained unchanged from 1985

Ending inventories for processed phosphates were down 4 percent, due to declines in stocks of superphosphoric acid, normal super phosphate, monoammonium phosphate, and diammonium phosphate. Wet process phosphoric acid stocks rose 29 per-

Phosphate exports posted increases of 9 percent for phosphoric acid, 20 for normal superphosphate, 11 percent for concentrated super and 1 percent for DAP. Phosphate rock

and monammonium phosphate exports and off by 30 percent and 23 percent asks.

Domestic disappearance of potash pol-ucts rose 5 percent for September but fell percent for the three-month comparison Granular muriate disappearance jumpel)
percent compared to September 1985 adj percent for the year to date Standard man ate shipments were down 8 percental coarse muriale down 17 percent relative the same period a year ago.

Production for the year to date me if percent compared to last year, led by game lar muriate's rise of 53 percent.

### Monoclonais

Continued from Page 7

dipstick diagnosis of disease. In this proces plastic sticks would be coated with more clonal antibodies, dipped in the body fide a stricken animal, then rinsed in a salad short baths. The cause or causes of the prolem would be pinpointed by charactering

color changes on the dipstick. Eventually, this kind of testing cook provide information about the level duatamination of feed with mycotoxins or pericides. It could define whether potentially harmful drug residues, antibiotics or cacinogens have contaminated milk, ment or poultry products.

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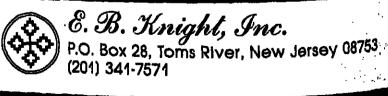
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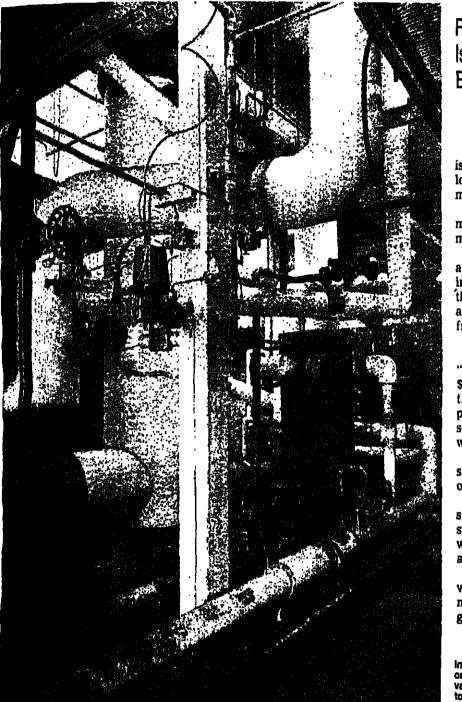
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### **Waste Reduction Coming to the Forefront**



Reducing Waste Output at Source Is Viewed as an Industry Priority, But a Systematic Approach is Needed

#### By AGNES SHANLEY

The cost of enforcing and complying with current hazardous waste legislation is forcing both the US government and the chemical industry to take a closer look at waste reduction at source, the most fundamental approach to waste

This response to the problem of hazardous waste disposal allows companies to meet environmental pressures and satisfy stricter Federal and state requirements while substantially lowering long-term costs.

Although environmentalists, government agencies and industry leaders have all voiced unanimous support for this approach, many feel that the US chemical industry has yet to put any systematic approach into action. A major obstacle, they say, is current environmental legislation, which centers on waste handling and treatment rather than reduction, diverting corporate attention and capital from developing innovative approaches to waste reduction.

ONLY STOPGAP SOLUTIONS

The Congressional Office of Technology Assessment (OTA) in its report, "Serious Reduction of Hazardous Waste", estimates that 99 percent of almost \$70 billion spent annually by Federal and state governments goes into controlling the aftereffects of waste generation. The options which chemical companies most often resort to-waste processing, recycling, and incinerationsometimes represent only stopgap solutions to the waste disposal problem, where one form of waste is exchanged for another, often at considerable cost.

Inform, a non-profit environmental research group, says preventative measures are often the option of last choice, implemented only after regulatory and operational pressures force management's hand.

Both OTA and Environmental Protection Agency have recently expressed strong support for developing a widespread strategy for waste reduction at source. EPA estimates that at least one-third of the 1.4 billion tons of hazardous waste generated by American industry could be eliminated if a more systematic approach to prevention were adopted throughout industry.

EPA's plan calls for the development of a national database on hazardous waste reduction techniques and an industry education program where companies would receive technical assistance to help them realize waste reduction

Similarly, OTA has advocated waste reduction legislation, and the establish-

industry and government leaders agree that more attention needs to be focused on waste reduction at source. As part of its waste reduction program, 3m uses a vapor compression evaporation system, shown at left, at its "Chemolite" plant to recover ammonia from its waste stream. The ammonia solution recovered is sold as fertilizer, generating annual revenue, while preventing the discharge of 677 tons of poliutants annually.

### Waste Management: an Industry Imperative

WASTE REDUCTION: Companies need to adopt a systematic approach to reduction at source . . . . . 31 CLEAN SITES: The industry-sponsored organization is facilitating cleanup efforts. . . . . . . . Page 34 INCINERATION: The slow-moving regulatory process could cause a capacity shortfall . . . . . . Page 36 UNDERGROUND TANKS: Chemical companies are seeking to avoid underground storage, ... Page 38 **OVERVIEW:** The waste management industry will continue to see high growth . . . . . . . . . Page 40 **WASHINGTON: Congressional report criticizes waste** RESOURCE RECOVERY: Increasingly, it is a costcompetitive alternative . . . . . . . . . . . . . . . . Page 41 PCB'S: Disposal techniques must jump through many  A

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ment of detailed corporate reporting proce responded to the survey each year from 1981 dures, grants and incentive programs, and a to 1984, overall waste generation fell 16 pernational voluntary goal of 10 percent haz- cent over that period, with landfill disposal ardous waste reduction per year.

Many of the major chemical companies have developed or are developing management strategies which focus on reducing waste at source, recycling or reclaiming what cannot be eliminated, and using incineration for most of the balance. This new approach involves using outside waste management firms for less than 5 percent of the total NPDES-treated watewater fell about 10 perwaste volume, with a minimal dependence on landfill and underground injection storage.

Chemical Manufacturers Association's alest hazardous waste survey indicates that

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down 35 percent; the amount of NPDEStreated wastewater fell 19 percent, while incineration increased 13.3 percent.

With three more plants contributing to the 984 survey, results showed the total amount of hazardous waste fell 8 percent from 1983 to 1984; treated wastewater generation fell

Survey results, while an indication of the overall industry trend, are still not conclusive: there is an inadequate amount of data progress in reducing waste has been made. available.Since chemical companies are still Comparing results from the 324 plants which not required to keep track of the total amount

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of hazardous waste generated in its three major forms, and many view their waste reduction practices as proprietary, the actual degree of waste generated and the success of waste reduction efforts cannot be definitively determined, Government records, reflecting the focus on waste treatment are

In its study, "Cutting Chemical Waste", Inform chose 29 organic chemical plants in California, New Jersey and Ohio, the top hazardous waste-producing states, to analyze the effects of Federal and state laws on waste

The group found that waste reduction was implemented at only 12 of the 20 study plants. More than half of the 29 companies. among them the largest producers, elected not to participate in the study. Inform found

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was considered only after regulatory de line pressures forced a change.

The group points out that, in addition is

opholes have been keeping producer in niques. The most prominent of these sides ness to the fact that deep well inject which fell 5 percent through 1980 io 191 increased 5 percent between 1983 and like

which exempts supplementary buning of wastes as secondary fuel sources from the scrutiny applied to incineration.

n waste reduction, there is broad agreen that lack of sufficient data impedes an account rate assessment. As the spokesman for the jor chemical company says, "There balke waste minimization going on out there often in the name of quality or yield improvement We just lack the data to prove it."

Sometimes, the waste reduction techniques are discovered as byproducts of an product development, and are adopted by be dustry. Continuous batch polystyrese, in pressure polyethylene and chloride Til processing are examples of new technic all resulting in substantial waste reducia which have replaced earlier processy methods used by the US chemical industry

More often, approaches to waste relieb must be worked out individually, baselz; specific plant strategies and practices let mentary improvements, designed to 🗺 product yield or quality, may have a in impact on waste generation, and are to cally a company's first step to waste with

tal regulatory affairs for 3M, describe! simple change in instrumentation in the firm's Oregon plant: computer-control's temperature monitors were installed to t prove yield and quality of a heat-sensit material. An expenditure of \$16,000 sec \$533,200 per year, and eliminated 137 loss solid and 53 tons of air emissions per year.

Other initial steps include improving # ess control and instrumentation, and imp menting operator training programs to are. spills. Union Carbide Corporation says at been able to significantly reduce water emitted in the form of air pollution this ye as a result of improved instrumentation? monitoring. The company plans to real both continuous and episodic emission by percent per year over a three-year pena Robert T. Jackson, director of environce tal affairs for the company's Chemical Plastics Division, reports that Carbide

Inform has isolated major categor waste reduction techniques: manufad operational and equipment changes, p reformulation, and chemical substi

ion changes require time to impl Those companies which have show dramatic reduction in waste general hose which established programs 1970's, when environmental pressu

hazardous waste generated. By the end of 1985, he estimate had reduced air emissions by water pollutant discharges b wastewater streams by 1.5 billion stable waste by 250,000 tons, and RCRA ardous solid waste by 18,000 tons. The ures are based on conservative est. Continued on Page 42

general focus on waste treatment, legis adopting full-scale waste reduction to well injection, which is still legal in the states. Now that landfilling has been all by ruled out, it remains the cheapest form of available disposal. CMA's survey bearing

Another loophole is the Clean Alr M

Whatever one's view of the progressing

WASTE REDUCTION TECHNIQUES

Dr. Russell Susag, director of environs:

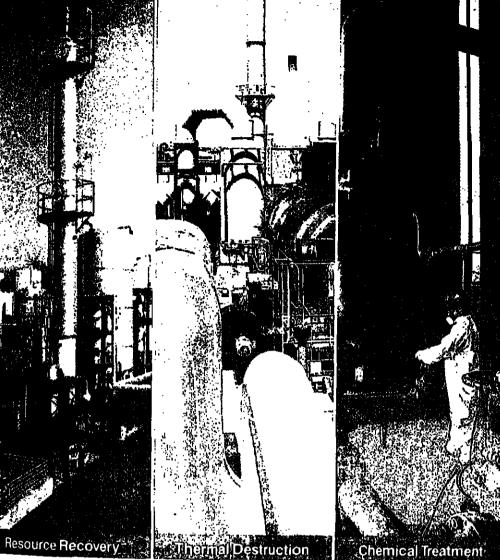
already met or exceeded its goal this 524

Processing, reformulation and sold

to mount, and the energy crisis forced agement to look at new ways of optim process and utilizing raw materials.

3M's waste reduction strategy, in placely to past 11 years, might serve as an industry model. Its "3P", or "Pollution Pays" program, attacks waste at all seed Dr. Susag reports that, since its inception 3P program has brought about a percent reduction in the amount of

### Technology Vs. Hazardous Waste









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November 17, 1986

### **WASTE MANAGEMENT '86 CLEAN SITES**





### **Clean Sites' Mission Now Well Under Way**

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chemical raw materials, and interme- Our clients are interested in show-

diates bound for waste disposal. We ing governmental agencies that they

reclassify these types of wastes using are doing their part to eliminate pollu-studies conducted on the largest com- tion on land fills. At the same time,

mercial chemical data base in the they are reducing their waste taxation waste recycling industry. they are reducing their waste taxation and future liabilities, which may arise

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sellable, we will negotiate a sale on thomselves. This form of recycling in-

your behalf, if so desired. All revenues creases bottom line profits, because it.

are due to you. We generally charge a reduces the amount of money spent

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fee based on normal disposal costs, yearly for disposal.

plus, obsolete, or off-specification icals,

Clean Sites, Inc., the independent, nonprofit corporation established in May 1984 to facilitate the cleanup of abandoned hazardous waste sites, is currently involved in about 45 sites throughout the country, and has made to cover a portion of the cleanup costs as an contributions towards the settling of a cleanup at about 20 sites.

"much of the original mission is well underway. We have helped responsible parties and EPA develop models." He adds, "We have at a Holden Mo., PCB waste site. Working become more central to the settlement process than we could have ever hoped."

Lee Thomas, Environmental Protection Agency Administrator, commented this year that Clean Sites "has facilitated very posi-tively the process of cleaning up hazardous

CSI in July completed its first project, a members. The organization is reviewing documents that should enable it to determine the site involving two warehouses and 11 trailers in Greensboro, N.C. The organization assite and managed the cleanup (CMR, 7/7/86,

In June, CSI was involved in the achieve-EPA resulted in a \$900,000 interim cleanup ness and costs of various cleanup options. of the Ciothier "satellite" site, where the po-tential for drum leakage had been discov-

cently at Fulton, another satellite of the Oswego area site.

settlement by year's end. A notable aspect of this site involves the role of superfund money contributions towards the settling of a inducement for responsible parties to settle. Under this mixed funding program, EPA can sue potentially responsible parties that do not settle to cover the superfund share.

CSI is involved in the early stages of work with a subcontractor, Joan Ebzery a Clean Sites spokeswoman, says, "we already have secured the site, built a fence, drained some pits, and done preliminary sampling." To promote positive relations with the city, Clean Sites held a meeting with the mayor of Holden and some 50 concerned community site's contributors.

Members of CSI's technical staff fresisted in bringing about the settlement at the quently are engaged in preparing and reviewing remedial investigation and feasibility study papers (RI/FS) that are generally required for Superfund sites. These studies ment of a settlement at a portion of a defunct analyze the extent of contamination, the efwaste disposal facility in Oswego, N.Y. The fects on air and water, the dangers posed to agreement between 38 companies and the health and environment, and the effective-

for a site in Connecticut. The organization says that its technical review broke an impasse at the site, enabling the potentially responsible party to reach an agreement with the Connecticut Department of Environmental Protection that resulted in a lim-

ited surface cleanup of the site.

At an Elkton, Md., location, Clean Sites built a data base holding more than 8,000 receipts and manifests used for quantifying wastes sent to the site and allocating costs. In Motco, Tex., CSI undertook a technical assessment that is expected to contribute to a agree to prepare a revised RI/FS at the site, and played a role in the parties' reaching an

> CSI points out that it has the capability to help parties execute all phases of cleaning a hazardous waste site: technical evaluation, cleanup cost allocation, negotiations leading to a settlement, and the actual cleanup itself

Miss Ebzery says that "most of our work is focused on bringing parties together, and on helping them to allocate cleanup costs among themselves and come to an agreement with whatever government they are

While Clean Sites may be asked to get involved in just one aspect of a cleanup situation, the organization believes that sites can be cleaned faster when most or all of the

stages in the cleanup process are integrated. At the Greensboro, N.C. PCB site, CSI drew up a cleanup plan and solicited bids for the work while negotiations toward a final settlement were in progress. This was made possible by an interim agreement on the allocation of cleanup costs among 15 responsible parties. The final settlement was simpler to reach once the selection of a contractor made the cleanup cost a known factor, CSI asserts.

In order to promote an integrated approach to waste cleanup, Clean Sites sends at least one person from each of its three main divisions — settlement facilitation, technical review and compliance and project management — to each site.

Clean Sites believes that its position as a neutral, non-profit participant better enables it to help remove obstacles in the cleanup process. The organization can deal with concerned parties in joint negotiations and individually to work at moving them toward a common ground.

CSI generally uses two-person teams in the settlement process, one of whom typically has a legal background while the other has a managerial or technical background. Often, one has private sector experience and the other is from the public sector. Approximately 40 percent of Clean Sites' professional staff comes from the private sector, while 35 percent is from the public sector and 25 percent has experience in both areas.

At the Clothiers, N.Y., site, the organization assisted in the allocation of costs and in settlement negotiations. EPA in this instance set aside a portion of the cleanup costs for non-settling parties to be responsible for, and issued a unilateral order under the standard

of joint and several liability to each usest tling party, with the potential for trebledup ages if they failed to conduct the work Within 30 days of EPA's announcement, the number of parties willing to settle was approximately doubled, and an emergency cleanup was able to proceed.

"At the very outset, a portion was desp nated for the recalcitrants," observes Clan Sites' Ebzery, and this contributed to "avery high percentage of participation" by poletially responsible parties.

With sites such as Clothlers, CSI believes is helping to establish models for saving rain able time and resources and protecting the environment from further harm. Pointing to the quick Greensboro, N.C., cleanup Car Powers says that it is possible to save 'a tounding amounts of money on transaction costs, litigation and pre-litigation posts.

Parties often "feel they'll be in a let-or fifteen-year morass," Mr. Powers cooling "but if they can sense a light at the enidin tunnel, this allows them to go ahead and make a commitment. The government do not need to get bogged down in litigation and the community senses it is part of a solution"
CSI gets involved with a cleanup upon the

request of a participant at the site EPA responsible parties, or concerned comm nity leaders may contact Clean Sites. The organization receives three requests a wet on the average, and has thus far assessed about 150 sites, 60 of them in depth.

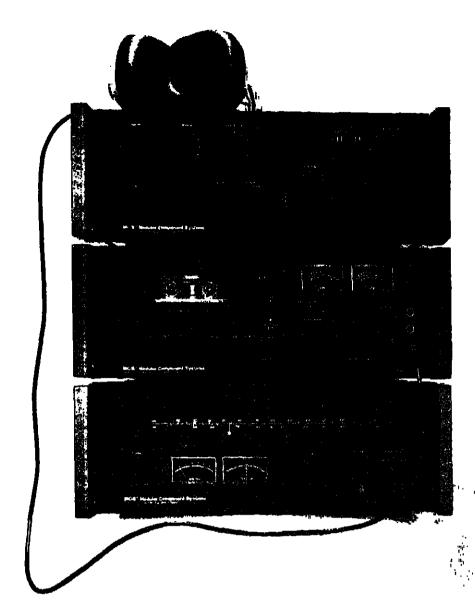
Clean Sites says it is most likley to take work at a site where it believes its involve situation could serve as a model for other cleanups. Some sites not listed on the hi tional Priorities List (NPL) have been twist down, as have sites with no known respect ble parties. Clean Sites has withdrawn him only one site in which it did become invoked

CSI's financial sustenance continues: come from corporate sponsors and private foundations. The organization is reimbus? by responsible parties for its work at 100 NPL sites, but not at the major superior NPL sites, where EPA is the indemnite except for project management tasks.

Clean Sites aims to become more selftaining, says Miss Ebzery, and has ask EPA to revise its indemnification so that the organization can be reimbursed for its a penses in facilitating the allocation of cost among responsible parties. Long term, ms resources must come from interested parts at a site while independence and neutrally are preserved, says CSI's Powers. Not No. sites are a testing ground for this, he add

ues, CSI will continue to stress the impa tance of fairness and cooperation in expedi ing cleanups. "There is a very strong seas (among responsible parties) that the shouldn't pay more than their fair share With an experienced staff and independs outlook, Clean Sites aims to ensure the extable settlements are reached.

CLEAN SITES: Workers at the Holden, Mo., site sample for PCB contamination in a creek jed 13-acre property. Clean sites has been active in cleanup efforts there.



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### **WASTE MANAGEMENT '86** INCINERATION







### **Incineration Capacity** Is Facing a Shortfall

The viability of hazardous waste incineration methods has long since been demonstrated. Now even its necessity is apparent and the construction of commercial and private incineration facilities is beginning to proliferate. Some fear, however, that regulatory snarls will create a shortage of incineration capacity as new regulations ban the landfilling of hazardous waste.

Interest in incineration as a waste disposal method intensified with passage two years ago of amendments to the Resource Conservation & Recovery Act. Among other things, the RCRA amendments require small waste generators to comply with the law. Most significant, land disposal will be virtually banned under the RCRA amendments within

Based on the effects of the RCRA amendments and additional superfund wastes, EPA estimates that by 1990 demand for liquid

organic waste incineration will increase seven to eight times over commercial and private capacity now available.

As a result of RCRA, continuous waste generators are beginning to look for disposal methods other than landfilling. Says James Nicotri, manager for incineration systems at the Baltimore-based consulting firm, Envi-ronmental Elements, "We saw a dramatic increase in the number of inquiries after November 1984, when the government passed the RCRA amendments.

Interest in incineration is one thing, however, and obtaining a final RCRA "part B" permit to actually operate an incinerator, is another. According to EPA, out of 225 working incinerators in the country, only 35 have final permits. Out of the 225, 31 are considare not respectively. ered off-site "commercial" incinerators, not connected with a particular waste generator.

According to Suellen Pirages, director of the Institute of Chemical Waste Management (ICWM), an industry trade group, none of these has obtained final RCRA approval.

It is this approval which is necessary be-

fore any new incineration facilities can be built. Dr. Pirages believes that a waste disposal capacity shortage is developing, and says that ICWM's "biggest concern is to get the permitting process to operate more expe-

ditously."

Bob Reincke, manager of public affairs at
Chemical Waste Management Inc., a major waste disposal firm, is more blunt: "The net effect (of the current regulatory situation) is the potential for a significant shortfall in incineration capacity if new incinerators cannot be permitted and placed in opera-

Similar stumbling blocks exist for companies geared to the clean-up of abandoned or mactive landfills. With the exception of superfund sites, incineration companies pursuing this "mobile" clean-up market must endure the same extensive RCRA permitting process as required for permanent incinerators. Operators lament that the permitting process can take much longer than the clean-

For superfund sites, actual RCRA permits are not required, although RCRA emissions standards must be met.

Significant changes in the mobile incineration permitting process cannot be made until 1988 when RCRA comes up before Congress for reauthorization. An EPA official says the agency is now talking to industry to see what its case is for a departure from the current site-by-site permitting procedure.
Until then, he says "We're taking a look at

possible changes under the current regula-tory framework." One possibility is a sort of "generic permit" a state would issue to a company for clean-up within the state. Every site would have to be listed, however, with specific corrective action conditions outlined for each. "This would provide some opportunity for streamlining," he says, but admit-tedly, "not as much as industry would like."

Despite the formidable challenge, disposal firms are forging ahead in the incineration business. The most tangible reason for their perseverance is financial reward. Harry Conger, President and CEO of Waste-Tech Inc. of Denver, Col., estimates the market for disposal of continuously generated waste was \$1.5 billion in 1985, and predicts it will grow close to 25 percent annually for the next

Considered by many to be a model for the industry is Chemical Waste Management Inc., which operates a commercial rotary kiln incinerator in East Chicago, Ill., and a fixed hearth incinerator in Sauget, Ill.

At present the company has obtained permitting for and is expanding its Sauget operation; the second unit should be operating by year end, says CWM's Reincke.

In addition, the company has applied for permits to add incineration capacity at treat-ment centers in Emelle, Ala., and Port Arthur, Tex.

through what it feels is a unique three u

Waste-Tech begins by analyzing a genera-tor's waste stream at its EPA permitted pilot incinerator in Golden, Col., says Mr. Corge

Waste-Tech will next bring a demonstr tion unit to the company's plant locationing two or three month trial burn, Mr. Copes feels this step makes Waste-Tech unique be cause the demonstration period proves to the customer the fluidized bed system's safety and reliability.

In addition, says Mr. Conger, the research development and demonstration permit a quired before operating the demo unit is the a short version of the final "part B" permit

The final step for Waste-Tech is scual construction of the commercial unit lier Waste-Tech offers four differnt programs, ranging from one where Waste-Tech willow and operate the facility to one where the company involved will buy the incineral and run it itself.

While Waste-Tech has been building general waste incinerators since the 1970's, the fact that none of its hazardous waste incinerators are yet in operation is not surprising.

chemical or refining companies have rusample burns in Golden, Colo. Two of these are ready for the on-site demonstration phase; and for one, a chemical company o the Gulf Coast, construction on an actualiz cineration unit has begun, with startscheduled for mid-1987.

Another outfit enjoying success is Environmental Elements, which is the North American licensee of Von Roll Ltd., Swedish devi oper of a popular rotary kiln incineral design. Environmmental Elements is but based in that it works with both commer and private concerns.

Among other projects, the company is volved with PPG Industries in Ohio in C. construction of an incineration facility geared to PPG plants in that region of the country. Start-up here is slated for lar Spring or early Summer 1987.

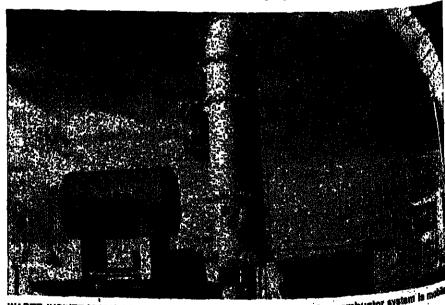
Environmental Elements is also work with a commercial operator, Waste Techn ogy Inc., to build a treatment center in Ex-Liverpool, Ohio. While preliminary EPARS mits have been secured, actual design with begin early next year, with start-up a three years later.

Mr. Nicotri of Environmental Elemental notes that the Von Roll design is used enter sively in Europe, meeting emissions subdards tougher than those in the US.

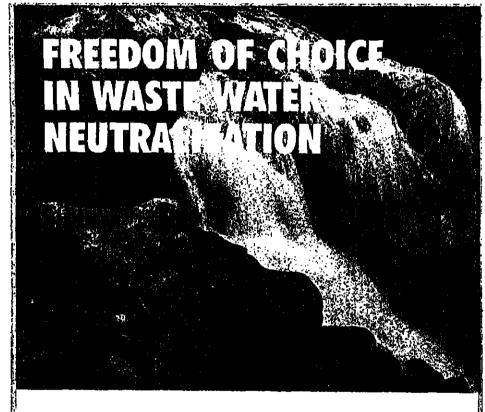
Both Waste-Tech and Environmental ments will also assist clients in writing at: defending permit applications. Permits to the Federal, state, and local levels are use ally all necessary.

Another promising company is Waste-Tech, which offers on-site fluidized-bed incinerators to continuous waste generators

Mr. Conger of Waste-Tech says that use entire permitting process alone can cost a company between \$600,000 and \$1 million. Mr. Conger of Waste-Tech says that b



WASTE INCINERATION: Waste-Tech Services Inc.'s demo and can be shipped to a client's site on four flat bed trucks.



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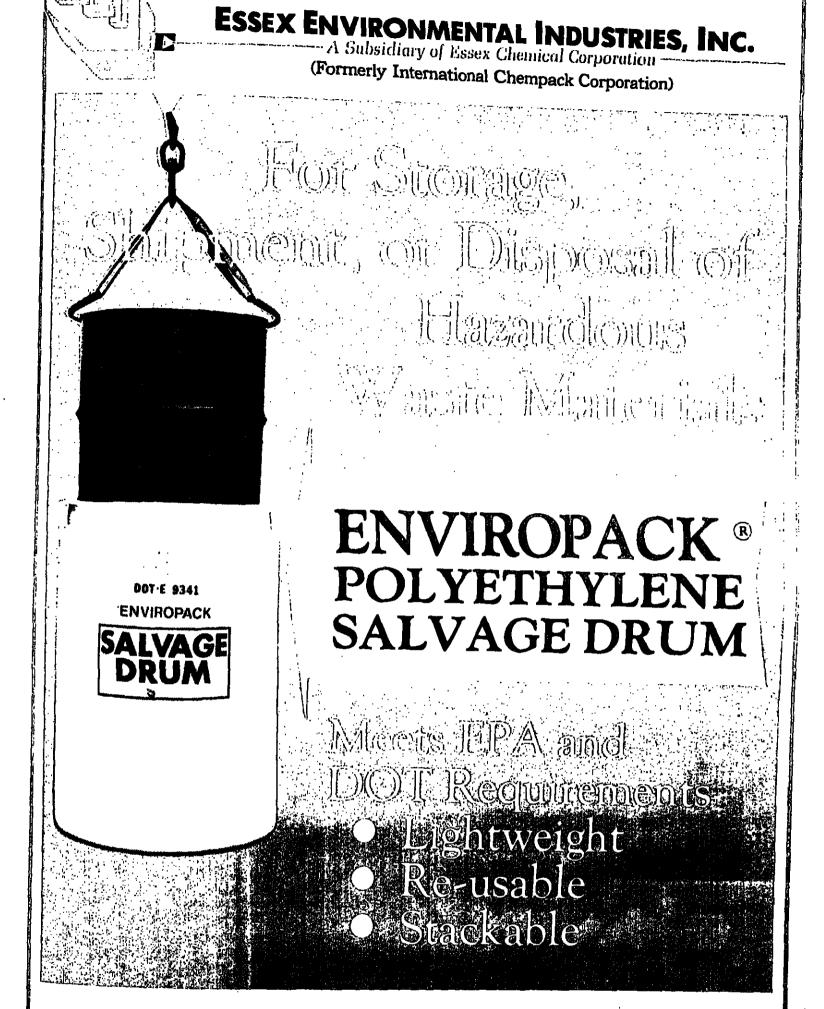
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### **WASTE MANAGEMENT '86** UNDERGROUND TANKS





### **Underground Storage:** Rules Set for Release

By RONALD BEGLEY

Early next year, Environmental Protection Agency is expected to issue pro- of installation, and exactly what kind of leak posed regulations addressing the problem of leaking underground storage tanks. While many of the details have yet to be worked out, EPA has already provided a pretty good idea of what the proposal will look like.

struction for new petroleum storage tanks, but they must be made of cathodically protected steel or non-corrosive materials such as fiberglass, and leak detection monitoring for both new and existing tanks will be re-

Underground tanks used to store materials defined as hazardous under the Federal superfund law will be required to have secondary containment systems in place.

"This will include double wall tanks, synthetic liners, or some other barrier to make sure that what leaks out is stopped," says Louise Wise, acting chief of the tank standards branch of EPA's office of underground

Variances may be issued to tank operators who can prove that they have an effective leak detection system in place, compatible with the material being stored.

its requirements will be regarding specific design and construction of tanks, the manner

detection system will be deemed acceptable. Because of these uncertainties, much of the industry is waiting to see what develops rather than trying to anticipate EPA's decisions and start conforming to them ahead of time. However, regulations at the state and local levels have been pushing chemical The agency plans to allow single wall con- and petroleum companies to upgrade their underground storage tank facilities and test-

Mobil Oil Corporation, for instance, has been in the process of replacing its underground storage tanks for several years under a program formalized in 1983, according to Carole Edwards of Mobil's Marketing & Refining Division. Mobil is pulling out its old, mostly steel tanks at its 13,000 service stations, and is replacing them with new fiberglass tanks, at an estimated cost of more than \$100 million, she says. In choosing which sites to excavate first,

Mobil is looking primarily at the age of the tanks and the corrosiveness of the surrounding soil. At some locations, double wall tanks are being installed, depending on such fac-tors as proximity of the tank to the groundwater, porosity of the soil, and local regulations. Most of the tanks being replaced date Although these aspects of the proposal are fairly certain to be included in the version to wards, and are made of non-cathodically pro-

storage, some chemical companies are opting to simply remove their underground tanks. "We have a long-range plan of eliminating our underground storage tanks," says Dow Chemical Company's Kurt Frey, manager of environmental regulatory activities for the Resource Conservation & Recovery Act (RCRA). "We will eliminate underground storage of regulated substances where it is safe and practical to do so; our policy is that we will not install an underground storage tank from this point forward."

Dow implemented this program in 1982, prioritizing tanks based on the regulatory status of the compounds they contain. In addition to the environmental concerns of the company. Dow is making the move to avoid the heavy expenses it sees associated with upcoming EPA regulations. "The handwriting is on the wall as far as regulations. Looking at future liabilities, retrofitting of tanks, and conducting ongoing monitoring, the eco-nomics are clear," says Mr. Frey, explaining why Dow chose to switch to above-ground

Ashland Chemical Company has also chosen to go to above-ground storage where possible. "We have removed all the underground storage tanks we can," says Ashland's Bob Sterrett, manager of environmental engineering at Ashland Chemical. He cites the lack of absolute assurance of leak detection systems as one reason for his company's action. "The technology to determine failure of an underground storage tank is at best not

Added to this is the inconvenience of using unneeded inventory to fill a tank to the top in order to perform a leak test, he says. As far as preventive measures, he cites the high cost of double-wall tanks as another reason for eliminating the use of underground storage

Another problem noted by Mr. Sterrett is that of leaking piping in underground storage systems. "An underground storage tank provider will say that his tank will last for twenty years, but that's no help if their pipes fall before that," he says. Also, cathodic protection on steel tanks does not solve the problem of leaking pipes.

According to Dr. Austin Snow, E.I. du Pont de Nemours & Co.'s secondary containment coordinator, 50 to 60 percent of leaks associated with underground storage tanks originate in the pipes, a problem not addressed by

the Groundwater Protection Program, which also includes training employees in monitoring and stopping leaks.

Rather than try to conform to the existing and impending regulations on underground storage, same abordist approximation of the second storage same abordist approximation and storage same approximation and s

One such system currently being marketed is Du Pont's "Hytrel" polyester elastomer liner. The liner is placed in the excavation pit during installation of the tank, and is designed to prevent the compound being stored from entering the surrounding soil or ground-water in the event of a leak. "Hytrel," according to Du Pont, is a tough, flexible poli by virtue of its resistance to petroleum profucts and a variety of chemicals.

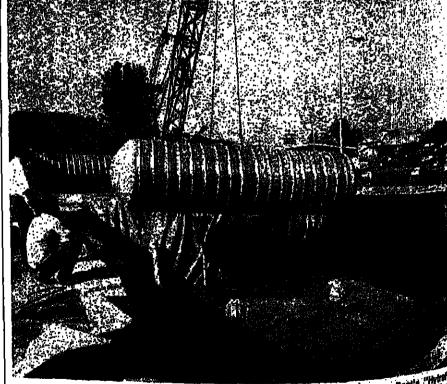
In addition to offering the advantage of protection from leaking pipes, liner systems are also more cost-effective than double wall tank systems, according to Dr. Snow.

While the industry is looking to preventive measures such as non-corroding materials resolved is the issue of leak detection testing A number of commercial leak detections: tems are available, but the industry most wait until next February to find out which system or systems will win EPA approval

EPA is getting ready to begin a large-scale testing program at its Hazardous Waste Engineering Research Laboratory facility in Edison, N.J. Jack Farlow, chief of the technology development staff at the laboratory. notes that there is a lack of hard data suptem vendors for their products. Consequently, his staff has set up an underground storage system for the purpose of testing the leak detection equipment available on the

volves being able to manipulate more than lo variables in the tanks, says Mr. Farlow, in cluding changes in temperature, presence and size of vapor pockets, tank deformation and the size of the leak. For the detection system being tested, it is first determined what it measures and how its measurement are used to determine whether or not a tanki leaking. Then, by running its own tests its EPA laboratory staff determines the validity of the procedure in question, as well as it

The final step, according to Mr. Farlow, for the vendor to come in and use his kit detection system on the EPA undergroud tank set-up, while the variables are manip lated by EPA personnel. At the end of the process, EPA and the industry will find of what guidelines governing leak detection system are to become the new industry star



UNDERGROUND STORAGE: A secondary fuel containment system, using Du Poil<sup>®</sup> polyester elastomer, is being installed under the gasoline storage tank being replaced stall a service station.

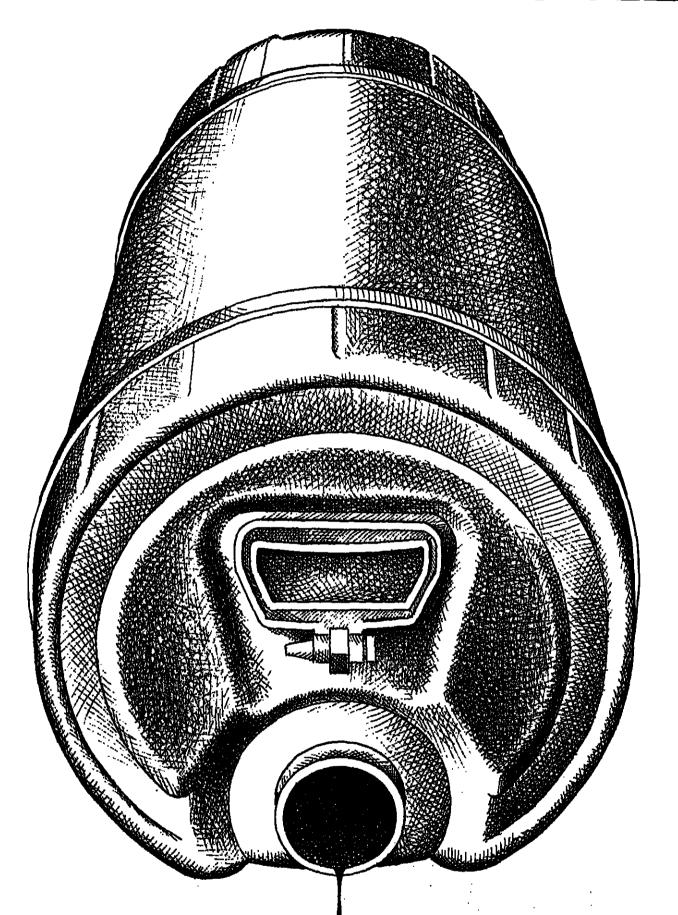
# be issued in February, there is much yet to be tected steel. Placement of the new fiberglass decided upon in the EPA proposal. The tanks is part of an overall Mobil effort called

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RHEEM MANUFACTURING COMPANY/CONTAINER DIVISION

November 17, 1986 CHEMICAL MARKETING REPORTER

### **WASTE MANAGEMENT '86 OVERVIEW**





### **Waste Cleanup Fuels High-Growth Industry**

The rest of the 1980's and the 1990's will continue to be cleanup time for the US chemical industry and all industries generating hazardous wastes. While there has been a virtual moratorium on the construction of major new producing plants by chemical makers, waste treatment companies that were hardly known in the 1970's have become the fastest growing employers of the nation's chemical engineering talents.

The commercial market for newly generated hazardous waste in the US is estimated at \$1.6 billion for off-site treatment. In addition, commercial firms have a piece of the \$11 billion spent on site for waste treatment in engineering services and mobile on-site treatment facilities.

Also, the cleanup of abandoned chemical dumps and the upgrading of operations at active disposal sites has provided a growing opportunity for engineering companies such as Kellogg & Co., of Denver, Colo.

Much of the chemical industry's continuing high level of capital expenditure has been devoted to improved pollution control (the other big tab has been for energy conservation), but because of the reauthorization of the Resource Conservation & Recovery Act in 1984 and the stringent requirements of the superfund bill signed into law by President Reagan last month, the pace of growth in commercial hazardous waste management is not expected to slacken from the 25- percent-per-year rate experienced so (ar in the

One of the largest and fastest growing-by huge acquisitions, increase in market share percent of its equity to the public, will be used and growth of the market—has been Waste Management Inc., of Oak Brook, Illinols.

On the way to total yearly revenues of \$2 billion, Waste Management had revenues of \$1,452,393,000 in the first nine months, up year ago, and net earnings rose 31 percent to \$161,299,000 from \$124,359,000.

The company's Waste Management En-

scheduled to open in 1988.

During the quarter, the company split off its Chemical Waste Management, Inc. subsidiary, by selling a portion of its equity to the

Chemical Waste Management made an initial public offering 18.9 million shares of common stock, or about 19 percent of the 99.9 million shares of common stock outstanding after the offering. Waste Manage-

In another development, Waste Manageoperating and maintenance services for mu-

ities, a move that will increase its capabilities for services to the public sector, said Dean L. Buntrock, chairman and chief exec-

Chemical Waste Management, which claims to be the largest provider of comprehensive hazardous waste management services in the US, said that the approximately \$310 million of proceeds from the sale of 19 to pay a cash dividend to Waste Management and repay certain indebtedness owed to that

Areas of rapid growth for CWM include resource recovery, thermal destruction, from \$1,187,867,000 in the same period a chemical treatment and consultation and remedial service for companies that do their own hazardous waste treatment.

Of these, the fastest growing for the indusergy Systems subsidiary signed a contract in try as a whole is likely to be high-tempera-September to build and operate for 20 years a ture incineration. Chemical Waste Manage-2,200-ton-per-day waste-to-energy plant in ment claims to have the highest capacity in Broward County, Fla., near Fort Lauderdale, the US for high-temperature inclineration which is expected to start operations late in and it is planning to add new capacity for future growth.

Waste Management also disclosed that it For the past twelve years, the company will build a \$20-million environmental moni- has been operating two ocean incineration toring laboratory near Geneva, Ill., for ships-Vulcanus I and Vulcanus II. These roundwater analysis and the development have been used for the destruction of polyof new analytical techniques. This facility is chlorinated biphenyls and biomedical waste, as solids, sludges and liquids.

A new name, in a small way, in the field of hazardous waste treatment is Degussa Corporation, the German-based producer of metals and catalysis and one of the world's three largest producers of hydrogen perox-

Degussa has developed and is offering commercially hydrogen peroxide technology for the treatment of cyanide-containing wament will continue to own 81 percent of these ters from mining operations, plating shops and various chemical processes.

As compared with existing processes for ment has acquired Envirotech Operating—cleaning up cyanide, the Degussa method is Services, of San Mateo, Calif., which provides said to avoid the formation of cyanogen chlonicipally-owned water and wastewater facil- are themselves pollutants. Any hydrogen

peroxide in the process will break downing oxygen and water, a spokesman for Degus

Another small but fast-growing cleaning manager is Rollins Environmental Services Inc., of Wilmington, Del., whose revenue have risen from just \$36 million in fiscal 1981 to \$105 million last year and topped \$15 million this year.

Rollins claims to be the technological leader in the chemical waste treatment and disposal industry, despite its comparative small sales volume. It operates facilities at Baton Rouge and Plaquemine, La.; Bridge port, N.J., and Deer Park, Tex.

Rollins' earnings in the last fiscal year ended September 30, were \$18,697,000 m from \$11,856,000 in 1985. In the fourth quarter, the company had earnings of \$5,860,00 up from \$3,218,000, as revenues climbed to \$39,846,000 from \$28,318,000.

Challenging Chemical Waste Management for leadership in hazardous waste incisestor technology has been GSX Corporation of Columbia, South Carolina. The company claims to have the most technologically a vanced incinerator operating at Roebuck, S.C., with a destruction efficiency of 99.99 percent. GSX's revenues and income have grown eleven times from the level of only sign years ago, a company spokesman stated

One of the companies rapidly expanding its role as an outside source for consulting and treating on-site wastes is John Zink Sevices Incorporated, of Tulsa, Okla, a sesidiary of Alleghany International Corpor-

Zink claims to have more such on-siteur operating that any other company in the world. All the facilities are managed by 🖖 Zink's own professionals and require now? tional staffing by the client companies

According to government figures, some! percent of all hazardous wastes are treated 51 percent are stored, 20 percent are & posed and 4 percent are recycled. The figue Continued on Page 42

### **Waste Control Efforts** Found To Be Lacking

Less than 1 percent of the annual \$70 billion national anti-pollution effort is aimed at curbing production of toxic wastes and current programs "do little more than move waste around," says a congressional report.

The Office of Technology Assessment says more than 99 percent of both Federal and state budgets for pollution control are spent to fight pollution after waste has already been generated - not to devise programs to limit the amount of toxic waste actually pro-

Existing pollution control and waste treatment methods often "do little more than move waste around, and many hazardous wastes, such as toxic air emissions, are not yet regulated," OTA says.

"Reducing the generation of waste is the most certain way to reduce risks to health and the environment from hazardous waste." says the report.

'Most hazardous waste experts have agreed for a decade that waste reduction should receive top priority ... but few resources have been committled to doing so," the report adds. "If waste reduction is the best answer, it deserves top priority, and the government and industry should get serious and make It work."

Rep. John Dingell (D-Mich.), who requested the study, says its findings show that by reducing waste production, US firms could improve productivity and "help restore the competitiveness of American industry in very difficult global economic environ-

By devoting virtually all their attention and money to cleaning up pollution, government and industry have limited the financing available for waste reduction, according to

Some firms have acted on their own to adopt waste reduction programs, the report says, noting the most active have saved millions of dollars in the last decade by limiting generation of toxic wastes. Minnesota Mining & Manufacturing Company (3M) has re-portedly saved almost \$300 million since

1975 with its waste reduction efforts. "Pollution controls solve no problem; they only alter the problem, shifting it from one form to another," says Dr. Joseph T. Ling, a 3M executive. "The form of the matter may be changed, but matter does not disappear."

Richard E. Heckert, chairman of E.I. du Pont de Nemours & Co., says rising pollution-control costs make waste reduction increasingly important.

"It's an inevitable consequence of the spond to cost problems and the government is providing enough of those for us."

Du Pont executive Paul A. Chubb also notes that waste reduction can give industry "a leg up competitively. Today an economically and environmentally acceptable plan for waste management may well make Du Pont the low-cost producer and hold the key to the success or failure of many of our busi-

But while two divisions of Du Pont reported 50 percent and 35 percent reductions, respectively, in the amount of hazardous waste they generated from 1984 to 1985, OTA says in most cases, industry has not taken November 17, 1986

advantage of the waste reduction opportunities that exist in every part of production.

Those opportunities, it says, include changing the raw materials used in production, changing production equipment or improving procedures, recycling potential waste and redesigning facilities to generate less

Although the Federal government hasn't done anything to encourage waste reduction, an even more difficult obstacle is the silence that surrounds the issue, says Joel S. Hirschhorn, director of the OTA research project. Because successful companies do not want their competitors to steal their

secrets, they keep quiet. "Take 3M. They have all this success, and yet 3M doesn't reveal any of the details of what they do. We face a problem of companles not documenting their experiences publicly for proprietary reasons," Mr. Hirschhorn says.

He explains that many companies are reluctant to pursue waste reduction out of fear that government would follow with manda-

"I think their fear is justified," says Mr. Hirschhorn, "They assume that if government moved into this area, they would inevitably look for a regulatory approach. Peonomics," says Mr. Heckert. "People will reand steel, have told us they are very worried about this,"

OTA says it would be impractical for government to attempt a traditional regulatory approach in promoting serious waste reduction efforts. The impact of prescriptive regulations on troubled manufacturing industries could be substantial, the report says.

Instead, it calls for voluntary efforts by industry. OTA advises; "Waste reduction succeeds when it is part of the everyday consciousness of all workers and managers involved with production — where the waste reduction opportunities are - rather than when it is a job only of those responsible for complying with environmental regulations."

But OTA also suggests legislation to creit an office of waste reduction within Enviro mental Protection Agency, a grants progeto improve general techniques for waster duction and a requirement that industry it port its waste reduction plans.

States should also be encouraged to estalish independent waste reduction boards !! report recommends.

J. Winston Porter, EPA's assistant admi istrator for solid waste and emergency a sponse, says he strongly endorses the water reduction approaches suggested by OTA.
There is an obvious need to raise industry.

consciousness on waste reduction, and companies are likely to respond positively, sp. Mr. Porter, because "it's one part of pollution control that, in many cases, has a net payoff. EPA also has a need to increase its avair

ness of waste reduction and incorporate concept into the agency's policies, says of the report notes that research on harming the report notes that research or harming the research or harmin waste reduction has a low priority at EA receiving only a fraction of 1 percent of the agency's current \$213 million resemble

In an effort to place a greater enuments waste-reduction in agency policy make Mr. Porter says he is setting up a plant and technology office within EPA that agency all of the agency's heferdom was serve ali oi

However, he says he disagrees with order to be proposal for an office of wastereduction an assistant administrator within Electric don't think the answer is another level.

don't think the answer is apouted bureaucracy," says Mr. Porter OTA points out that not all israphic waste can be eliminated, and an effective control system will always be needed, as a control system will always be needed, as a control commitment to waste rear says a national commitment to waste rear tion can insure that the burden of heart waste does not continue to grow and threats.

future generations.

The report says a first step could be in the report says a first step could congress to set a national voluntary. Continued on Page 42

### WASTE MANAGEMENT '86 RESOURCE RECOVERY



### **Resource Recovery Grows in Popularity**

By PHILIP MANN

For legal and economic reasons. chemical companies of all sizes are striving to increase their resource recovery capabilities, while other companies specializing in resource recovery are opening around the country.

Resource recovery used to be regarded unfavorably because raw materials were genrally less expensive than recycled materials in addition, land disposal was relatively cheap. However, raw material costs have increased and reauthorization of the Resource Conservation & Recovery Act of 1976 will virtually eliminate land disposal of wastes, leading generators to find other methods of

Therefore, resource recovery is now a highly regarded way of eliminating wastes and saving money, while complying with Federal regulations.

Allied-Signal has many resource recovery programs that help recoup operating expeses, say company spokesmen. A new program, under the auspices of Allied's Aquatech Systems Division, involves a technology called electrodialytic water splitting. Through this technology, salt is extracted from waste streams and regenerated into its acid and base forms. Brian Rogers, a technical sales engineer at Allied, says several companies have uses for salt's acid and base forms in their chemical processes.

Allied contracted its first sale of this technology in late September. Mr. Rogers estimales the technology should allow the pur-chaser to save about \$400,000 on average the first year. He says this savings will result from fewer hydrofluoric acid and nitric acid suchases and decreased waste disposal

Allied also recovers calcium fluoride from is metallic fluorides facility in Metropolis, The company once predicted that savings iron recovered calcium fluoride would alon the \$3-million recovery facility, built in 682, to pay for itself by this year. Roger Christen, director of the manufacture of ands, says that goal has not been reached, till adds that "the economics have been close to (our) original projection."

Another program consists of recovering marketable sulfuric acid from an electric Company's magnesium sulfite medium. The electric company uses magnesium oxide to temove sulfur dioxide from its flue gas Anober, After, the spent scrubbing medium is sent to Allied, which regenerates the magsium oxide and retains the recovered sul-



DIRCERECOVERY: Evergreen Oil inc.'s re-telecovery facility at Newark, Calif., uses heology by turn waste oil into new hubdi-

furic acid. The magnesium oxide is sent back

to the electric company. Chemical Waste Management is primarily involved in two types of resource recovery Its solvent recovery system consists of taking a customer's spent solvents and running them through a distillation process, separating reusable material from non-reusable material. The reusable material is either returned to the customer as a clean solvent, or sold to other companies. The non-reusable material is disposed of.

Bob Reincke, manager of public affairs at CWM, estimates that between 70 and 75 percent of a typical spent solvent stream will yield reusable material. He continues that the recovered material is resold at about 80 to 90 percent of the cost of the original raw

The company's second main program is the "Alternative Fuels Program." Waste streams that cannot be distilled into clean solvents are converted into fuel by a proprietary process, blended with other compatible wastes, and filtered. What remains is a fuel that can be burned in industrial furnaces. Mr. Reincke notes that this system is only contracted to those who use industrial furnaces. like cement kilns and asphalt plants.

At one of CWM's facilities is what the company calls a fractionation column, used to separate multi-component solvents. For example, if a company has contaminated a solvent by accidently placing it in the wrong tank, the fractionation column can separate the materials into their original forms. EXPANSION PLANS

Mr. Reincke says CWM hopes to expand its capacities for all its programs. In 1983, the company had one facility, but it now has five. Eco-Tec says that its acid purification unli (APU) is able to reclaim pickle liquor for continuous use, as opposed to the waste treat-

ment or disposal of spent solutions. Eco-Tec started the APU in March 1985 at Continuous Colour Coat Limited, a continuous strip electrogalvanizing and coil coating facility near Toronto. The company uses sulfuric acid to pickle cold-rolled steel prior to electrogalvanizing. The APU is designed to remove organic contaminants and control the amount of dissolved iron in the pickle solution continuously, so the acid can be used

Previously, iron build-up in the process bath rendered the acid ineffective. The bath had to be continuously decanted to waste and replaced with fresh acid solution. Eco-Tec says the APU equipment operates with minimal attention and only occassional maintenance, and does not interfere with the master

The steel pickling line operates three shifts a day, five days a week. Prior to APU installation, the pickling bath was continuously discarded at a rate of 0.75 gallons per minute. Continuous Colour Coat Limited pegged its annual sulfuric acid loss at 280 tons, or about \$26,000 (Canadian) a year. Another process cost was 225 tons a year of neutralization lime used in waste treatment. This added about \$18,000 to the annual cost. Now, with APU fully operational, the savings in acid and lime are more than \$40,000 a year. Total cost of implementing APU was less than \$100,000.

Eco-Tec's most recent program, according to general sales manager Michael Dejak, is helping the printed circuit board industry. Copper is used to lay down circuits on plastic boards. Some of the copper ends up in the waste stream. Eco Tec recovers the copper, which is in liquid form, turns it into copper metallic sheets, and resells it. Because the copper was formerly disposed of in landfills, Mr. Dejak calls the program "a great incentive for responsible companies."

A third Eco-Tec program involves alu-

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minum anodizing. Aluminum surfaces on buildings are finished, to prevent corrosion. Eco-Tec recovers caustic soda, sulfuric acid and phosphoric acid used in the finishing process. Mr. Dejak says that caustic soda consumption can be reduced by 70 percent, sulfuric acld consumption by 50 percent, and phosphoric acid consumption by 85 percent.

Kipin Industries is building a hazardouswaste-to-fuel plant near Pittsburgh. The plant was originally scheduled to be open last Summer, capable of handling 100 tons of sludge and waste a day. Peter Kipin, president of the firm, says the company decided to redesign the plant, increasing its capability to 600 tons a day. Because of the change, the plant won't be opened until August or September 1987.

The plant will be a joint effort among Kipin, state and local governments, two electric companies, and two universities. The government will provide financial assistance, the universities will be involved in research, and the electric companies will use

Kipin also hopes to expand its portable units. For a fee of about \$50 per cubic yard of hazardous waste, Kipin takes oily wastes and mixes them with filler, such as sawdust or wood chips. A Kipin-developed additive binds the oil and filler, and afterward the product is briquetted, or turned into pellets, by low heating. Mr. Kipin says the fuel generally has a heating value of 11,000 or 12,000 Btu's per

On October 30, Evergreen Oil, Inc. opened a \$10-million facility which reclaims discarded lubricating oil and turns it into usable petroleum products. Evergreen claims this is done without waste or pollution. Using the science of "Petrecology," the plant is in

A fleet of tanker trucks collects used oil

ail type including

from service stations, auto dealerships and railroad yards and brings it to Newark. Previously, says Ted James, director of corporate communications, such oil was discarded or burned. With Evergreen's system, the used oil can be re-refined and turned into usable lubricating oil again. The waste material removed from it is used to make roofing mate-

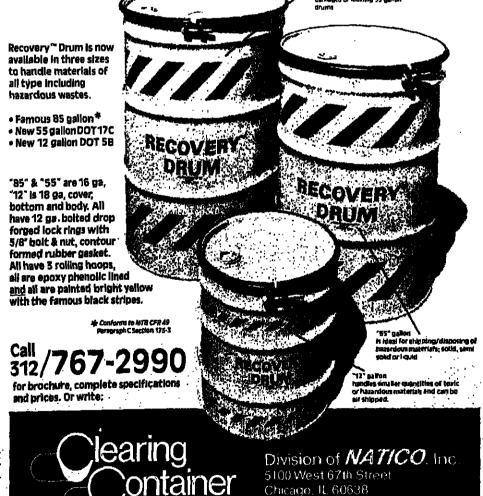
Mr. James gives the following breakdown: when the oil comes to Newark, about 10 percent is water. Of the rest, 80 percent becomes usable lubricating oil. About 6 percent is used to power the plant, about 8 percent is turned into the equivalent of number two diesel fuel, and the remainder becomes asphalt flux.

Petrecology was developed by Evergreen's parent company, Kinetics Technology International, and was first used in Greece. Mr. James says that facilities similar to the one in Newark, but twice the size. are planned for Chicago, Dallas, Denver, Kansas City, New York and Philadelphia. The next facility, to be built in Los Angeles, is

scheduled for next Spring. CF Systems Corporation's "Organics Extraction System" is designed to recover organics from liquid or solid wastes. According to CF spokesman Thomas Cody, the waste is fed into the top of the extractor, while a solvent moves into the bottom of the extractor. The two make contact, and about 99 percent of the organics are dissolved. Clean water, or a water-solids mixture, is removed from the extractor.

At this point, the solvent gas-organics mixture leaves the extractor and passes to the separator. Most of the solvent vaporizes in the separator, releasing concentrated organics. A heating process then vaporizes the remaining solvents. Organics are drawn off from the separator and recovered for re-use or disposal, usually by incineration.

### Two MORE reasons to use Genuine Recovery" Drums:



CHEMICAL MARKETING REPORTER

### **WASTE MANAGEMENT '86** PCB'S





system include the recovery of energy waste streams and reapplication of the

sary for removal of pollutants by income

The Modar technology is targeted for a

ocprations as waste generators, come

waste treaters and disposers, and decome

nation of superfund sites. Modar and Or

expect full-scale plant operations to be in

December 1987. Although this new tel

ogy is not an incineration process, it east

EPA combustion efficiency guideline for cineration of PCB's by fifty times, according

Though all of these techniques of the rinization, chemical treatment and the

methods of PCB disposal are promite to

long demonstration, testing, publicion

and approval process that goes handlated

with PCB's slows development downston

tributes to the mounting quantities in his

Tests such as the General Electric EP

witnessed demonstrations of detoxilicals

of PCB's in South Glenn Falls, N.Y., are,

The search for alternative heat trace

media to PCB solutions has led industry a

searchers to various silicones. "The slice

are ideal for transformers," says Wap

Jenkins of Unison. "They are innocuous

ultra-stable dieelectric fluids. They don't

quire annual servicing such as chedigh:

leaks in an askarel transformer, and the v

The fire-point of the Union Carbies

cones used in the final step of Unison's IF

removal process is greater than 300 days:

centigrade. Though a mineral oil or sire

transformer costs less initially, the sile?

transformer is said to require less mar:

tinely postponed.

far less flammable.'

log at the three EPA-approved incincula

to a Modar spokesman.



### Claimed advantages of the Modar/O

### PCB Disposal Methods ing the issuance of an EPA permit to begin testing the furnace at Model City, N.Y. site. Proposed at-sea incineration plans were scrapped last Summer and landfilling liquid PCB's has become increasingly expensive the contraction of the co Await EPA's Approval

By NICHOLAS BOYLE

Problems associated with the disposal of polychlorinated biphenyls have led to increasingly diverse and specialized so-

Transformer owners, for example, wishing to get the most out of their units but needing to comply with a Federal order to remove the PCB's by 1989, have been seeking methods of PCB destruction that would allow them to keep a transformer in service for the rest of its intended life.

One such method is Unison Transformer Services Inc.'s "Reclass 50" transformer retrofill technique. It involves a time-consuming but effective process whereby PCB's are leached out of the transformer capacitors by a dielectric fluid called TF-1, separated out of the TF-1, and then shipped to one of three incineration sites approved by Enviromental Protection Agency for disposal.

Unison, a wholly-owned subsidiary of Union Carbide Corporation, is waiting for final EPA approval before it begins fullscale operations at its Henderson, Ky., plant. Wayne Jenkins, plant manager in Henderson, says the long and frustrating hearing and approval process is coming to an end: "Only the final permit remains. We anticipate starting commercial operations in late

An advantage for the transformer owner is the on-site method employed in the "Reclass process. Technicians arrive, drain the PCB's into drums, install the TF-1, and dethen be re-energized and operated with the

adds, and do not take increased productivity

The company was cited by OTA as one of the national leaders in waste reduction. Ear-

lier this year, 3M's Decatur, Ala., plant was

awarded a state citation for progress in

waste reduction. Company spokesmen report

that company plants in Tennessee, Minne-

sota and Wisconsin have received similar

praise. An integrated problem solving ap-

proach has been the key. Dr. Susag explains,

tion and pollution management issues out of

the exclusive domain of the corporate staff,

involving manufacturing, design and opera-

Among the innovations used to encourage

cooperation are "idea sheets," posing prob-lems brought up by individual plant man-

agers and executives. When solutions are

found, design and plant teams responsible

are cited and the amount of money and waste

Dr. Susag says that waste reduction at

source has definitely paid off, illustrating

this with an example of changes imple-mented at 3M's "Chemolite" plant in Minne-

sota. The facility, which produces magnetic

oxides, was discharging too much ammo-

nium sulfate, a reaction byproduct, into its

had a choice: either build a waste processing facility for \$1 million, which would entail

vnen concentrated ammonia

tions people in the process.

saved are reported.

We have tried to take environmental protec-

Waste Reduction Continued from Page 32

derson plant and the transformer is filled with another batch of TF-1. After another five-month period, "the unit is drained again, re-gasketed, silicon is installed to sponge out the remaining PCB's, and, once a 90-day test period is completed, it is reclassified for commercial use," says Mr. Jenkins.

Federal law stipulates a unit must be 96.67 percent free from PCB's, says Mr. Jenkins, but our results before EPA were over 99 percent free of PCB's, or less than 2 parts per

The contaminated TF-X is put through a proprietary separation process at the Henderson plant that reclaims 95 to 98 percent of the TF-1 and isolates the PCB's for shipment. "There are no byproducts from this process; we use no process water and no discharge results," says Mr. Jenkins.

A slight amount of PCB's may escape into the tank vent, explains Mr. Jenkins, but it is trapped by a carbon filter bed which is incinerated along with the PCB's.

This transformer reclassification process benefits the owner by allowing continued operation but eventually the transformer's capacitors are going to expire. For those askarel transformers still containing PCB's at this expiration point, Chemical Waste Management Inc. and Electro-Pyrolysis Inc. of Wayne, Pa., are developing a plasma arc furnace — a "thermal treatment unit that would offer complete destruction of the capacitors and PCB's at the same time," says

part with the PCB's. The transformer may is a one-step sealed loading system which One of the primary benefits of this design dielectric fluid inside for five months, after mum. The other is that the capacitor's reduces human exposure to PCB's to a miniwhich, the process is repeated. Contaminated molten metallic residue is cooled into an in-TF-1, now called TF-X, is taken to the Hengot, from which the metals can be reclaimed.

solution recovered is now being sold as fertil-

izer, generating \$150,000 in revenues per year, and preventing the discharge of 677

Similar innovations, from new reactor

cleaning systems to water-based pill coat-

ings, have resulted in similar savings and

Like 3M, Dow has had a corporate "multi-

media" waste reduction program in opera-

tion for over a decade. From 1970 to 1984, the

company saw a 90 percent reduction in air

management at the firm, reports that Dow

processes all of its wastes internally, mostly

through its Texas Division. None of its haz-

ardous waste it handled off-site; less than 1

percent of the total amount of waste gener-

ated, in the form of incinerator ash, is land-

The company is focusing on reclamation,

also become a more prominent form of waste

reduction at Dow's Louisiana Division plastic

plant, Mr. Delcambre reports that about 500

pounds of HDPE are being recycled there

daily. Non-process specific biodegradation is

the main form of treatment at the company's

Mr. Delcambre reports that the program

cineration and blooxidation. Recycling has

Ryan Delcambre, issue manager for waste

tons of water pollutants.

substantial waste reduction.

because of the controversy surrounding the ncidence of migration into nearby water resources and will not be permitted, unless under special circumstances after June, 1987. Faced with the rising costs of incineration and the growing backlog of PCB-laden materials, the chemical industry is focusing on the detoxification of PCB's.

Chemical Waste Management has been operating its "CMW-DeChlor" technique since last Summer. This treatment process, less expensive than incineration, strips the PCB molecules of their chlorine atoms and allows mineral oils to be recovered.

Degussa Corporation, seeking ways to treat the enormous PCB problem in Germany and at the same time reclaim the oils that contain them, is at work on a distillation process that disperses metallic sodium throughout the contaminated oil (CMR 4/14/ 86, pg.18). "The sodium metal reacts with the chlorine in the PCB's and you get sodium chloride," says Michael Verbeeke, vice-president of chemicals at Degussa. The pilot plant is currently under construction and will interact closely with companies manufacturing mineral oils and the equipment to handle them. Mr. Verbeeke adds that commercial treatment should begin, once the correct patent is acquired, in the Fall of 1987.

Another approach to PCB disposal has been developed and successfully tested by Modar Inc. of Houston, Tex., and Cecos International Inc. of Buffalo, N.Y., at Modar's research facilities in Natick, Mass., and Cecos' Niagara Falls site. It is an oxidation process whereby contaminated materials are pressurized and introduced with compressed oxygen into the system. The solution is then heated to above 374 degrees and a pressure of 3200 pounds per square inch is maintained. Constituents of the waste solution are either oxydized or converted to carbon dioxide, wa-

feel that the industry has made definite progtechnical assistance to help compu ress in waste reduction at source, most conachieve waste reductions. cede that there is ample room for improve-

As Mr. Delcambre says, "much effort is being made, and industry education movements are in progress, but many companies still don't have programs going. The movement toward waste reduction will be given its biggest push if top management within the dustry supports a systematic concept."

Dr. Susag feels that a more sweeping at-tempt to reduce waste will require shifting the focus from a narrow base of product and yield improvement to a more widespread goal of overall pollution reduction and envionmental compliance cost savings.

### **Waste Control**

Continued from Page 40

reducing industrial wastes by 10 percent annually for the next five years.

Mr. Hirschhorn says such a goal could help convert the long stated importance of waste reduction into a true priority and reduce annual environmental spending substantially,

By reducing waste, concludes OTA, industry would use materials more efficiently and management, regulatory compliance and future cleanup costs, as well as reduce uncertain but potentially large civil
and criminal liabilities and tribinal liabilities and criminal liabilities and cr reduce uncertain but potentially large civil

In a recent report to Congress, EPA says a storage or other storage system, partial processes indicates toward what will eventually he an industry has the potential to reduce the condition of t survey of 22 industrial processes indicates

nance and has lower installation and it term operating costs.

"EPA found that industry has a signifi potential to reduce public health and ronmental risks by minimizing its hazard waste production," says Mr. Porter 'k result, EPA will encourage industry to ways to reduce both the volume and too

Of the 266 million metric tons of haza waste generated annually in the US E says the chemical industry produces 1800 lion tons, or 68 percent.

### Waste Cleanup

Continued from Page 40 add up to more than 100 percent kees storage and treatment usually figure is posal and recycling.

Of the 20 percent of the hazardous ris

that are disposed, some 7 percent fold landfills, 45 into impoundments and land storage systems and the remaining percent into injection wells. Of the water that have been treated, present practice volves incineration of only about 1 to 18 cent of the volume, while most of li-85 percent—goes into some kind of some and the rest is treated by blodegradaling? tems, chemical neutralisation and

and criminal liabilities and promote modern-ization and innovation.

In a recent report to Congress EPA save that industry has the potential to reduce the amount of hazardous waste it currently produces by one-third or more.

The agency plans to develop the first national computerized data base on waste reduction techniques and says it will provide toward what will eventually no toward

### HEAVY & AG CHEMICALS

### Sodium Tripoly Gets Continued from Page 3

ergy in the preheating treatment of me waste, an enclosed system which proje gew to 30 percent this year, from 27 complete control of the process, and the climination of stacks and scrubben are percent last year. Another dark cloud is the possibility of more anti-phosphate legislation. Currently, says Monsanto's Huggins, discussions about prohibiting phosphate-containing laundry detergenis are going on in Virginia and North

> The feeling among many in the phosphate industry, though, is that these bans have less than (avorable chances of enactment, and that overall, anti-phosphate sentiments are on the wane. Today, about 25 percent of the IlSmarket is closed to phosphate detergents. Imports continue to annoy tripoly produc-

> en Through September they are up more than 25 percent over last year's levels. At 5 or 6 percent of the market, imports are not a significant volume threat to US producers, but they do have an effect on pricing. Today's sodium tripolyphosphate list price

> of 37% cents per pound in bulk, f.o.b., represcals a decrease of 2 cents per pound since the beginning of the year. Producers attributed the reduction to import pressure and improved operating costs.

The softening of the dollar has decreased veness of much of the imports from Europe, but material from major exporters such as Israel, Italy, China and Mexicois relatively unaffected. Overall, producersfeel imports will not penetrate much fur-

Sources say that for the majority of cuslomers tripoly is sold at list. For some of the largedelergent companies, however, a small mount of discounting is said to exist.

CHORALKALI - Dow Chemical USA is initiating a \$10-per-ton increase in the offlist price of chlorine and a \$25-per-ton increase in the off-list price of caustic soda solution. The increases are effective immedialely for spot business and as terms allow for centract business.

New chlorine prices will not exceed \$195 er ion, f.o.b. Freeport, Tex., Plaquemine, la, and Pittsburg, Calif.; and \$200 per ton.

10b Northern shipping points.
For caustic soda solution, prices range from \$175 per ton (in Freeport and Plaquemte) to \$300 per ton (ln Arvada, Colo.). All pices are dollars per ton (basis 76 percent Na.0) for 50 percent regular grade.

Prices for 50 percent purified grade are

120 per ton higher than regular grade prices at applicable shipping points. Prices for 73 percent regular grade are \$30 per ton higher than 50 percent regular grade. Prices for 73 percent purified grade are \$45 per ton higher han 50 percent regular grade.

Dow notes that, with moderate demand stouth, chlorine operating rates are above 90 percent of on-line capacity. Additionally, Now says that caustic soda demand has increased, resulting in what the company calls nimproved "balance" of these co-products. bow also announces that, effective Januil, a superfund tax will be added to chlothe at \$2.70 per ton, and caustic soda (all Rades) at 28c per ton, as a separate line item SULFUR CHEMICALS — Occidental

### CHLOR-CAUSTIC OUTPUT AUGUST: SHORT TONS/DAY

27,437 29,287 27,247 23,272 24,400 23,244 13,559 14,645 13,426

28,321 29,254 28,583 558 601 717 35,060 36,385 38,029 OPERATING RATE 90.0% 86.6% 78.3%

Chemical Corporation is announcing a new price schedule for its line of sulfur products. Sulfur monochloride, in bulk tankcars and trailers, will cost 17 ½ c. per pound (up from 16 ¼ c.); for truckload quantities of drums, 24c. per pound (up from 221/2 c.); and for less than truckload quantities of drums, 25 %c. per pound (up from 24c.). Prices are f.o.b. Niagara Falls, N.Y., freight equalized with

### PRICES TRENDLINES

WEEK ENDING NOV. 14, 1986 CHANGES/UP

CHANGES/DOWN

### **HEAVY & AG INDEX**

The Heavy & Ag Chemicals Index reflects the prices of 18 representative materials in this sector and the quantity of each produced in 1985.

Ch	nemical Prices Start o	n Page 52
Nov. 15	5, 1985	113,69
JCI, 17	', 1986	113.69
vov. 7,	. 1986	113.69
Nov. 14	4, 1986	113.69

emoyne, Ala, for bulk shipments only.

Sulfur dichloride, in bulk tankcars and trailers, will cost 18 % c. per pound (up from 17 4 c.); for truckload quantities of drums, the price will be 25 1/2c. per pound (up from 24c.); and for less than truckload quantities, 27 1/4 c. per pound (up from 25 1/2 c.). Prices are f.o.b. Niagara Falls, freight equalized with Lemoyne for bulk shipments only.

Sulfuryl chloride's new price, in bulk tankcars and trailers, will be 40c. per pound (up from 38c.); for truckload quantities of 15-gallon drums, 53 1/2c. per pound (up from 50c.); for truckload quantities of 55-gallon drums, 45c. per pound (up from 42½c.); for less than truckload quantities of 15-gallon drums, 56 ½c. per pound (up from 52 ½c.); and for less than truckload quantities of 55gallon drums, 48c. per pound (up from 45c.). Prices are f.o.b., Niagara Falls.

Thionyl chloride, in bulk tankcars and trailers, will cost 51c. per pound (up from 50c.); truckload quantities of 15-gallon drums will cost 70c. per pound (up from 68c.); truckloads of 55-gallon drums, 61c. per pound (up from 60c.); less than truckload quantities of 15-gallon drums under 5,000 pounds, 67c. per pound (up from 65c.); less than 15-gallon drums more than 5,000 pounds, 72c. per pound (up from 70c.); and less than truckload quantities of 55-gallon drums more than 5,000 pounds, 64c. per pound (up from 62c.). Prices are f.o.b., Niagara Falls, freight equalized with Baytown, Tex.

Occidental says the increases are necessitated by rising raw material and labor costs. Stauffer Chemicals produces sulfur chlorides in Lemoyne, and Mobay Chemical Corporation produces thionyl chloride in Bay-

SUPERPHOSPHATE — Demand for normal superphosphate has dropped consider-ably, say observers.

The switch to other sources of P2Os is price motivated. Farmers are said to prefer using normal superphosphate, but cannot because of their financial troubles. As a result, says one observer, demand for blend fertilizers is growing, at normal superphosphate's expense. "MAP and DAP are cheaper sources

of P<sub>2</sub>O<sub>5</sub>,"he says.

Fertilizer Institute figures corroborate observers' claims. The year from July 1985 to June 1986 saw production drop 31 percent and domestic disappearance drop 34 percent compared to the same period a year earlier.

"Those figures will get lower," laments an observer. Another adds that farmers will continue to use cheaper material. Despite the situation, notes one observer, capacity for normal superphosphate has not decreased. November 17, 1986

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CHEMICAL MARKETING REPORTER

November 17, 1986

levels exceeded state quotas, the company has enabled Dow to realize substantial sav-

producing a solid sludge, and eventual land disposal headaches, or find a way of recoverdisposal headaches, or find a way of recoverdisposal headaches. ig ammonia in the process bed.

Americas as reducing waste by 10 percent each from 1984 to 1985. Two divisions of Du decided to use a vapor compression evaporator, costing \$1.5 million, to recover ammonia from the waste stream. The 40 percent NHs

Although most major chemical companies

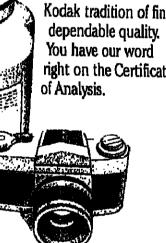
ultimately by billions of dollars.



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The medical and scientific advisory board of the Alzheimer's disease and related disorders association (ADRDA) annamed today that it will be organizing further testing of the oral drug, tetrahyinspinorcridine (THA), in the treatment of Alzheimer's disease patients.

The report describes the findings of the Curestly of California at Los Angeses. Dr.

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### Alzheimer Drug To Be Retested

This is in response to a report published in the Nov. 13 issue of the New England Journal

elered THA to 17 patients, average age of 70. gith presumed moderate to severe Inheimer's disease. Each patient was given THA grally in doses determined individuallylargach patient and nine or more capsules of commercial lecithin per day in this double-lind study. Overall, 10 of the 17 patients !bwedsignificant improvement in performace on some tests and ratings. No serious

side effects attributable to THA was ob-According to the medical and scientific advisory board of ADRDA these results are

interesting and provide a basis for further research. This research needs to be replicated by other laboratories and with many more patients before definitive answers can be given about THA's value in treating Alzheimer's patients.

Alzheimer's patients have decreased amounts of the brain chemical, acetylcholine. THA inhibits the enzyme, acetylcholinesterase, which breaks down acetylcholine. By inhibiting this enzyme, THA increases the amount of acetycholine in the brain. THA lias also been reported active as a potassium channel blocker. Lecithin provides the essential substance, choline, uses to create acetychloline.

Over the past few years other cholinergic drugs have been tested in Alzheimer's disease with relatively little or no therapeutic benefit. These tests have raised and crushed the hopes of Alzheimer's disease patients, their families and caregivers. In order to speed the process of assessing the aviue of THA in Alzheimer's disease, ADRDA's medical and scientific advisory board is organizing a team of scientists to replicate these findings in double-blind studies of THA. These studies will attempt, with a larger group of Alzheimer's disease patients, to replicate the results reported by Dr. Summers and his associates.

ADRA is a national not-for-profit voluntary health organization dedicated to finding a cure for Alzheimer's disease by developing and funding research programs. By the end of 1986 ADRDA will have spent an estimated \$4.5 million on 122 separate research projects.

### Standard Oil

Continued from Page 3

improved technology to meet a growing demand. "Davy's derivative technology enables us to shift feedstocks from high-cost acetylene to lower cost butane," he adds.

Peter Waite, chief executive of Davy Mc-Kee Petroleum & Chemicals, says the ability of the combined technologies to produce lower cost engineering plastics and elas-tomers will have a substantial impact on the

advanced materials marketplace.
"The availability of Davy's butanediol to PBT technology, commercialized by our Frankfurt-based subsidiary, Zimmer, and he opportunity to develop PBT to selected fibers, enhances the market potential avail-

able to our companies," he says.

Some 51 percent of this year's 350-million pound maleic anhydride demand is expected to come from unsaturated polyesters, with 11 percent going to lube oil additives, 8 percent to agricultural chemicals and 10 percent into production of fumaric acid.

Butanediol's fastest-growing outlet is to polybutylene terephthalate, a high growth thermoplastic, while gamma-butyrolactone is a precursor for producing the pyrrolidones family of chemicals, including N-methyl pyrrolidone, a solvent under consideration as a replacement for methylene chloride i paint stripper formulations. Tetrahydro furan finds use in solvent applications and in poly-THF for specialty elastomers.

### PEROXIDE TIMES

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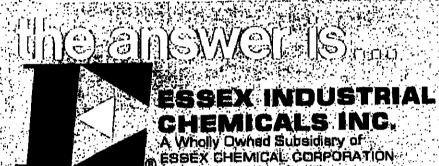
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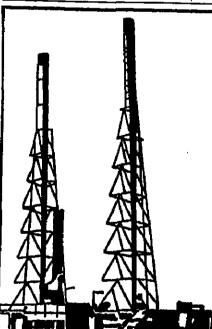
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granular and powder available in Technical, FCC and U.S.P. grades. Used in water purification, food, and Act to end land disposal of untreated toxic wastes in the next five years. The agency estimates it will cost industry \$152 million a year to meet the restrictions on dioxins and

In response to the ban, the Halogenated Solvents Industry Alliance (HSIA) is urging its members to immediately arrange for incineration of their waste material.

At the same time, HSIA is strongly calling on EPA to work with state and local governments to expedite the siting and permitting processes for incinerators in order to provide for the fastest possible increase in capacity.

HSIA president Dr. Paul A. Cammer said, "EPA must recognize the reality of this situation. The new prohibitions on disposal of solvent wastes at hazardous waste disposal facilities mean industry will have to rely al-

most exclusively on incineration.
"Right now," Mr. Cammer stated, "there is inadequate incineration capacity for certain categories of waste to meet current, let alone future, demands. While it is true that many general incinerators exist nationwide, the capacity for incineration of solids and sludges s grossly inadequate.

'This means," Mr. Cammer stressed, "EPA must act immediately to increase the capacity of existing incinerators and permit the construction of new facilities."

SOLVENTS ARE RECYCLED Mr. Cammer points out that a major portion of chlorinated solvents used in this country are recycled, thereby fulfilling the resource recovery intent of RCRA. This also reduces the volume of solvent waste requir-

ing disposal. The waste sludge that remains following the recycling process is the object of this rulemaking.

Mr. Cammer called on HSIA members to contact their Federal and state legislators and regulators to urge them to work for the rapid approval of new incinerators in their districts, as well as increased capacity for

those already in operation. Mr. Cammer also says that companies without access to incineration services should contract for them as quickly as possi-

He notes, that there are some exemptions to the new regulations. It may be possible for some companies to get a one-year extension of land disposal rights, with a possible renewal for an additional year. EPA will consider these requests on a case-by-case basis.

Other exemptions to the land disposal ban are a two-year delay for wastes with a total solvent content of less than 1 percent and a two-year delay for "small quantity genera-tors," who produce 100 to 1,000 kilograms of waste per month.

Mr. Cammer says HSIA is preparing an

EPA Draws Praise Continued from Page 7

information package for its members who includes details of the procedural requirements and instructions for filling as being. to the Resource Conservation & Recovery ual company's petition for an extension of record dresses and telephone numbers of Febru and state hazardous waste officials, adds of commercial incinerators and solventer.

"HSIA endorses incineration as the most complete and environmentally acceptable method of waste sludge disposal. However, method of waste studge disposal nowing we are greatly concerned with the agent assessment of both incinerator capacity in the demand for solvent sludge waste," it Cammer adds.

He says HSIA will continue to work we EPA to further quantify and update both cinerator demand and capacity for sold to

### Scientists in Flap

Continued from Page 7

agency involved, the Pan American liab Organization."

It was also disclosed last week that it searchers at Oregon State University his conducted field-trials on a gene-alterdial vaccine in New Zealand without permissa from the US government. The tests week nanced by the Department of Agriculture and approved by two agencies of the Ner Zealand government.

A spokesman for the Industrial Blokel nology Association said the revelations flect a belief by many scientists that USE technology regulations are a barrier nits than a safeguard for the emerging industry

"The pathway may be clearer in the nations to getting approval," said D. & Goldhammer, director of technical altri

Environmentalists responded by flight lawsuit which asks the US District Costs Washington to invalidate the White Hea

The Foundation on Economic Trees 9 Environmental Protection Agency and Agriculture Department ignored the adult of their own scientists to permit certain? ganisms to be released into the environment without review.

The suit contends documents show that of the 23 scientists who reviewed the mistions warned against the exemptions

"They clearly show an overwhite number of scientists at EPA and USDA opposed to the biotechnology guidelies! the President and said they were sclecally indefensible," says Jeremy Ric foundation president



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ing through fundamental changes as it struggles with lower growth, declining value added, and reduced potential for

Yet even though the business is changing, it is thriving. The key to product development for the next five years is more complex metal replacement and the development of specialty product systems. The results of those changes will not bear fruit for almost a decade, but growth will hold at 3 to 6 percent

per year until then. So says Business Communication Company, Stamford, Conn.-based research firm in a new study which adds that producing companies such as E.I. du Pont de Nemours & Co. and General Electric Company have been shifting focus toward "product modification" in recent years, anticipating the maturing of the market.

Emphasis is primarily on alloying, but fiber and filler compounding/reinforcement are also being stressed, as are the utilization of liquid crystal and interpenetrating network technology.

#### Engineering Resins Markets

	1985 (MM lbs)	1990 (MM lbs.)
Automotive	475	650
Electronics	. 325	400
Consumer	. 250	300
industrial	. 165	185
Construction	165	188
Prototype	30	60
Specialties		50
Other		85
Total	1,519	1,918

Source: Business Communications Company, Stamford, Conn.

Such products and polymer modification techniques illustrate how resins producers are targetting specific niches with specially tailored products to maintain market share.

Most producers are, moreover, positioning themselves in the "swing" automotive and electronics markets through special engineering programs — for example, for plastic bumpers, or through the acquisition of hightech firms that are well-placed in electronics. Many of them are also developing alloys to meet changing performance require-

The catalyst for these moves is the declining growth rate in the automotive and electronics industries that has become increasingly pronounced in recent years. These industries are now in a position of semi-maturity, and are, moreover, facing heightened international competition, BCC says. The large housing segment of the electronics industry, for example, was hit by the slump in the computer industry as well as a sharp rise

in imports of housed electronic asssemblies. Thus, a market that turned in a dismal 3.5 percent growth total in 1985, might recover this year or next — but, BCC predicts, "to no more than a 5 percent rate of growth." Gone

The engineering resins industry is go-ng through fundamental changes as it of the swing electronics and automotivesse.

Other segments — consumer, industrial construction, for example — face declining growth rates as the sectors mature. Instant the market is becoming heavily dependent the economy, which, economists predict an grow at 2 to 4 percent over the next several

While a lower growth rate for the industry as a whole is forecast, BCC sees the specific part of the business as the silver lining to the cloud. "Producers are developing new products and product systems to fight downsul pressures in the industry. A new realismbs taken hold of the industry, which bodes rel for creative responses to the future" ma the report.

The "swing" industries - electrosks automotive — have been hit by competition from overseas, and show no prospect of return to substantial growth. Likewing the slump in home computer sales has hit and neering resins, as has the general faller of the construction, consumer, and industri sectors of the economy.

But within that overall flat outlook to report finds promising niches that offer growth equal to the 15 percent of the box years. The specialty part of the business is which producers are retooling for very specific markets, is where growth will be found. The report finds new realism and producers, particularly within the addentive and electronics markets.

With regard to industry trends, BE projects average annual growth at U.F. cent through 1990, with 15 percent growth the prototype and specialties segmen While this may be slow for the industry. whole, clearly there are opportunities in company that can position itself to take: vantage of the new markets.

### Rohm and Haas

Continued from Page 5

tlal competition" between the two comp nies in the sale of ion exchange resin is been eliminated.

The suit also charges that high slark costs in the industry will probably multi-new companies from entering the marks According to the proposed consent decay which cannot become official until at lear days after publication in the Federal Reter, Rohm and Haas must offer to all

California resin plant and its production! mulas through an independent broker. The company would be required be tinuc operating the plant until it is sold an at least six months. In addition, Robert Hans would have to assist the purchast company in establishing a research and velopment laboratory, advise the purdison the production process, and help the firm hire and train a sales and technicist

to restore competition in the business.

The proposed decree would allow Recorded. and Haas to retain certain French asset

### COATINGS & PLASTICS

### PVC October Hike Successful: Resin Makers Plan Next Round

describe October's pricing move as successful, and say they have seen prices for the resin firm between 1 and 2 cents per ound since September.

Withdemand and capacity utilization high. many are planning a second round of increases, to take effect December 1.

So far, Shintech Inc. has indicated that it will raise PVC selling prices across the board by 2 cents per pound in December, moving the market price for pipe and general purpose grade resin to 32 cents per pound and 33 entsper pound, respectively. Formosa Plastics Corporation USA will go along with the increase, a spokesman says, but plans to boost its selling prices, already uniformly one cent per pound lower than the industry average, by 1 cent rather than 2 cents per

Demand for PVC, which soared over the Summer in response to high construction rates, has been exceptionally strong this

SALES UP 9 PERCENT

Through September, sales rose 9 percent and production 7 percent over last year's year-to-date figures. October also saw a healthy market, with preliminary SPI data showing sales for the month up 11 percent over 1985 year-to-date levels.

Producers report that November sales bode well for the market; some feel that domestic PVC demand this year could well exceed earlier projections of 5 to 7 percent

Continued tightness in domestic merchant supplies of vinyl chloride monomer (VCM), shich forced many to cut PVC production earlier this year, has had little effect on curent production rates. Most producers relate that they are operating at full, or close to full

Weak construction demand and discounting caused selling prices to slip 2 cents per ound over the first half of the year, with a osiderable impact on margins. Moves to crease market prices in January and June, obbiditally successful, lost momentum; Ocobe's "increase" was actually a second reistatement of January's selling price sched-

### RIME PIGMENTS

LEAD OXIDE — Effective November 7, all major producers of litharge and lead oxide raised prices for the products by 1c. per pound. The increase was prompted by 1c. per pound likes in lead metal costs.

Currently, Hammond Lead Inc., a major producer, is listing litharge at 34.5c. per pound. Other producers quote similar prices.
The market is expected to grow 2 percent this year, producers say.
ZINC OXIDE — With zinc metal prices up

to 50c. per pound, producers of zinc oxide raised prices for the pigment by 3c. per pound late last month. This is the third time prices for the colorant have been raised since July, when metal costs first began to climb. New Jersey Zinc Company, which raised

### **PRICES TRENDLINES**

WEEK ENDING NOV. 14, 1986

CHANGES/UP

Lead oxide, 1c. per lb. Zinc oxide, 3c. per lb. CHANGES/DOWN

### COATINGS INDEX

The Coatings & Plastics index reflects the prices of 13 representative materials in this sector and the quantity of each

produced in 1985.	
Nov. 14, 1986	306.4
Nov. 7, 1986	306.4
Oct. 17, 1986	306.4
Nov. 15, 1985	306.4
Chemical Prices Star	

prices effective October 30, is now listing American-process zinc oxide at 57c. to 59c.

St. Joe Mineral Corporation increased prices on October 21, and now lists its "500" series French-process grades at 55c. per pound, with USP and photoconductive grades at 59c. per pound and 50c. per pound, respec-

Pacific Smelting Company raised prices on October 27, currently its French-process grade is listed at 58.5c. per pound, with activated grade at 57c. per pound.

Producers describe plastics demand for zinc oxides as excellent this year; the paint industry demand for pigment is "not bad" this year, they say, but not as strong as had been hoped, one product manager says.

#### PLASTICS MATERIALS

COATING & PIGMENT IMPORTS: SEPTEMBER

145,324 20,942 N/A 777,682 64,032

94,874 1,205,867 1,743,745 640,482 2,711,022 90,000 82,660 133,473 617,691 29,840,012 387,725 40,000 6,546,410

CENSUS BUREAU REPORTS ON THE TOP PAINT MATERIALS.

POLYVINYL BUTYRATE — Producers of PVB have been expanding capacity this year to meet with growing demand for the resin, used in laminated safety glass and related adhesive applications, as well as specialty coatings.

bound, with lead monosilicate at 34.5c. per pound and lead oxide from 38.5 to 39.5c. per located and loca

202,693 162,651 131,378 N/A 929,870 9,084

23,937 227,074 351,419 427,068 528,837 19,822 175,431 190,117 526,635 413,303 21,829 2,362,178

QUANTITY 2,194,411 12,728

152,998 22,045 40,000 386,995 230,108

146,440 2,213,795 1,790,655 912,479 2,918,416 243,000 180,415 114,118 747,749 35,222,520 681,616 8,912 8,977,868

\$ VALUE 1,354,795 74,345

49,421 310,494 418,775 1,443,588 554,254 52,921 366,497 200,766 679,457 21,726,215 665,037 2,134 2,681,58

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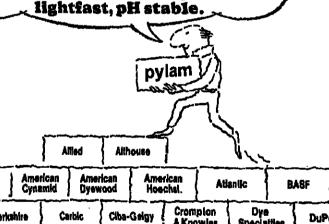
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□ Other:		
. Name		
Company	Industry	
Addrans		
L Coy	State	- Zip

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November 17, 1986 CHEMICAL MARKETING REPORTER.

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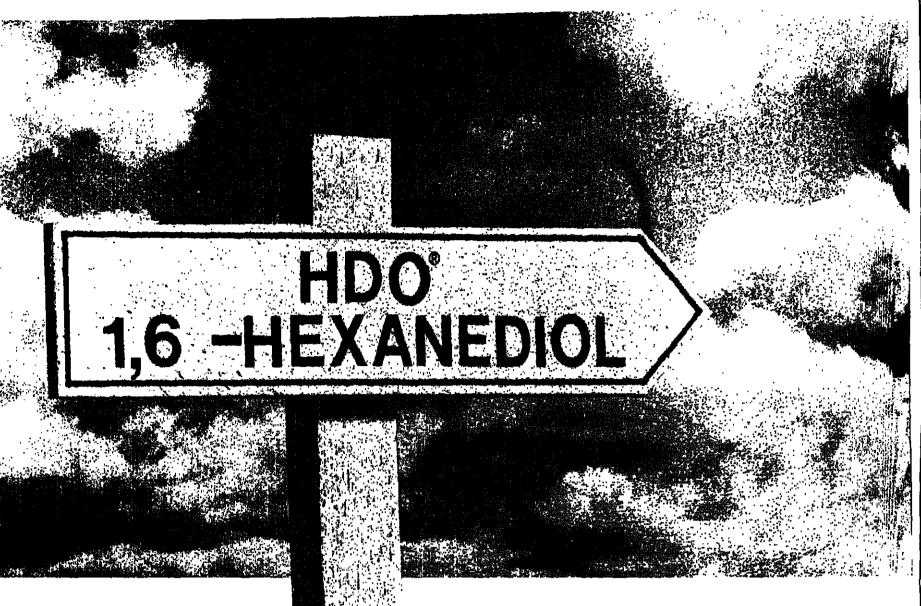
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November 17, 1986

CHEMICAL MARKETING REPORTER

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### PERFUMES & FLAVORINGS

### Linalool, Linalyl Acetate Sales Send Prices and Imports Up

Linalool and linalyl acetate sales have rency differentials," says an aroma chemical depleting current US rency differentials," says an aroma chemicals broker. He notes prices have been raised selectively to avoid straining the market. stocks. Spot prices for the two aroma chemicals have strengthened 15 to 20 percent over the last three months in esponse to the increased buying activ-

Linalool increased from \$2.95 to \$3 per pound to \$3.40 to \$3.50 per pound. Linalyl

acetate is quoted at \$4 per pound.
"The big rush on linalool and linaly! acdate caused the present shortages," says an aroma chemicals broker. "But it is the weaker dollar," he adds, "that is behind the activity in the first place."

Another broker, agreeing that the weak dollar has spurred foreign interest, regards thetraditionally static aroma chemical pricing as a major incentive.

"Last Summer, when foreign buyers became aware that US producers were not raising their prices, in effect selling the materials at a discount, they took whatever was available." He adds that despite the flurry of mying the currency will fluctuate again and the roles will reverse: "It is a temporary

Domestic producers, meanwhile, find themselves selling material at higher prices and at a faster rate than they can generate it.

SUPPLIER SOLD OUT

"Sales of linalool and linaly! acetate have been increasing substantially both domesti-

cally and abroad," says a domestic supplier.
"We are sold out of these two materials."

This applier emphasizes that the overseas market is not solely responsible for the market strength. "Our domestic market has seen a significant increase." a significant increase as well."

import figures of linally acetate show larger volumes coming into the US in 1986
blan in 1985. January through August, 1986
imports iotalled 736,843 pounds while yearand lotate for 1986. and totals for 1985 reached only 696,864

Sources speculate that circumstances simhar to those affecting the synthetic hydroxy citronellal market (CMR 9/29/86 pg. 26) now perialo to linalool and linalyl acetate.

Larger producers with compounding capacities on both sides of the Atlantic bring material into the US because fixed costs, banks to currency exchange rates, are

A representative of a major international limited and linally acetate producer said such a move is "a possibility." Amarket analyst attributes the export fig-

wes to a compounding switch rather than an increase in domestic consumption. "That they reswitching the use of the aroma chemicals from abroad should hold true," he says. As to the price increases themselves, indairy sources are in agreement that supplies are confident sales won't suffer. "The largest suppliers feel they won't lose busi-uss if they increase prices in line with cur-

Another aroma chemicals dealer feels prices on these larger commodities will be

raised whenever possible.

"Whenever there is an opportunity to raise prices, as has been justified recently by for-

### PRICES TRENDLINES

WEEK ENDING NOV. 14, 1986

#### CHANGES/UP

Annatto seed, Peruvien, 5c, per ib. Balsam oil, Peruvien, 50c, per ib. Basil oil, Madagescer, \$5 per ib. Cederleaf oil, 50c, per ib. Fennel, Indian, 3c, per ib. Fennel, Indian, 3c, per kilo Raimarose oil, Brazilian, \$1 per kilo Saffron, \$5 per ib.

#### CHANGES/DOWN

Anise seed, Chinese, 5c. per ib.
Bergamot oil, \$1 per ib.
Canangs oil, 25c. per ib.
Cardamorns, mixed greens, 25-30c. per ib.
Clove leaf oil, Medagascar, 60c. per kilo
Eucalyptus oil, 70%, 75c. per kilo
Laurel leaves, Turkish fancy, 10c. per ib. Lamin isaver, turkish faricy, 10c. per ib. Lemon oil, Italian, 45c. per kilo Orange oil, Valencie, 10c. per kilo. Savory, Yugoslavian, 2c. per ib. Spearmint oil, Chinese 60%, 40c. per kilo

#### PERFUMES INDEX

The Perfumes & Flavorings index reflects the prices of 11 representative materials in this sector and the quantity of each supplied in 1985.

Nov. 14, 198671.	00				
Nov. 7, 198671.					
Oct. 10, 198671.	00				
Nov. 15, 1985 71.0					
Chemical Prices Start on Page 52					

eign buying, then producers will seize it," he

Japanese producers have been raising their prices, according to an importer, to get the most from the market. "The Japanese also raised linalool prices as a reaction to other market pricings, though not as

Outlooks for the linalool and linalyl acctate market range from steady to strong.
The domestic supplier foresees "the current situation continuing through the next 6 to 9

A broker ties pricing to the welfare of the dollar, predicting a surge on international markets in the first quarter of 1987 and a

subsequent price softening.

A market analyst also sees a direct correlation between the dollar and the linalool market, but is less confident the dollar will regain its early 1985 posture very soon. 'Indicators aren't pointing to the kind of

growth necessary for substantial strenghten-Continued on Page 69

### SEED & SPICE IMPORTS: AUGUST

ASELECTION OF STATISTICS FROM THE BUREAU OF CENSUS.

raway seed	AUGUST	JULY	1986 TO DATE	AUG. '8
Sary seed	b. 575.534	622,110	5,298,681	376,58
		2,112,893	16,903,146	1,743,42
rnamen, unground	b. 205.598	325,362	2,607,103	377,71
ores.	b. 129,564	192,402	1,676,582	200,16
Mander	b. 185,089	148,499	1,793,583	116,46
orlander until beed intel seed	b. 840,677	492,047	4,488,561	171,81
Mnel seed.	b. 180,016	501,611	5.194.854	1,011,22
oger noci	b. 178,849	489,210	3,457,101	324.78
Hard agost	b. 1.081.377	984,405	6.081,977	1,202,69
island seed, whole . Image, unground . Yanun, whole	b. 6.553.927	7.977.770	59,418,787	6,358,09
iganum, whole Prica Prica	b. 0,563,927 b. 248,086	801.309		452,28
Purally AUGIS	240,000	705,088	5,435,045	344.6
Shar Li	0. 710,210	736,247	11,319,087	504.46
Maraund	702,007		67,123,936	3,300,88
Capalcum	0, 0,000,011	10,348,606	11,332,843	1.037.64
Gene "Inter Unground	0, 1,000,420	1,684,210	4.352.437	925,48
Recommended to the second seco	0. 0.0,001	495,211		
Manager at Talling 1	-1 4-1940	66,240	1,060,427	221,92
Mahana anga anga anga anga anga anga anga	b. 465,068	239,743	2,861,512	490,60
rmete. maskyane.	b. 345,532	972,421	3,686,104	
Transportation of the second section of the section	b, 61,383	237,550	1,718,261	



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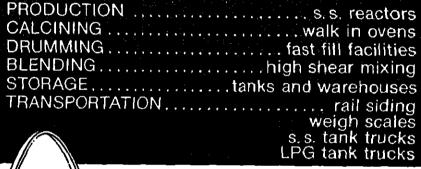
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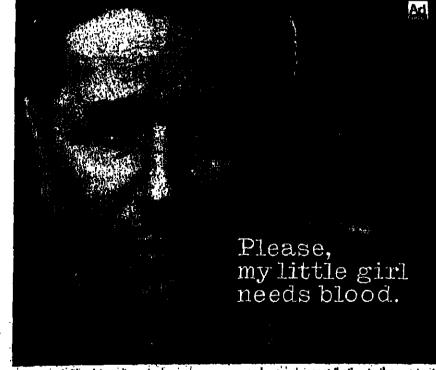
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CHEMICAL MARKETING REPORTER

### **CHEMICAL PRICES**

WEEK ENDING NOVEMBER 14, 1986

This chemical prices section contains spot quotations and/or list prices of suppliers of chemicals and related materials on a New York or other indicated basis. The listings are based on price information obtained from suppliers. Note that posted prices do not necessarily represent levels at which transactions actually may have occurred. They do not represent bid and asked prices, nor a range of prices over the week. Price ranges may represent quotations of different suppliers as well as differences in quantity, quality and location. All matters under this heading are fully covered

An index of weekly chemical market a

<u>A</u>		
Ables alba, dms	24.00	27.00
Acotaldehyde, 99%, tanks, frt. alid. fb. Prices 1c. higher in West.	.37	-
Acciaminophen (see N-Acetyl-p-aminop Acciaminde, tech, flaked, bgs, t.f., f.o.b.	henol)	
worksb.	1.29	-
Acotic acid, tech., tanks, divd. Eib. Acotic anhydride, tanks, divd. Eib.	.25 .43%	_
Acetic anhydride prices fc. higher in Vi Acetoacetanlide, dms., t.l., divd jb.	/est. 1.29	
Acutoacet-o-anisidida, dms., t.i.,		-
civd	2.70	-
divdib. Acetoacet-o-toluidide, dms., t.l.,	2.85	-
divdib. Acetoacet-m-xylldide, dms., t.l.,	1.58	-
divdth.	3.33	_
Acetone, tanks, divd. E	.25 .27	~
divd. Zone 2 (Calii.)	.27	_
ing Calif.) 15. Acetonitrile, lanks, frt. alid 15.	.53	.54Vz
Acetophenetkin (see Phenacetin). Acetophenone, tech., tanks, f.o.b.		
works	.76 2.15	.85
N-Acetyl-p-aminophenol. c.l., r.l.		
works	5.95	6.64
(rt. extra	.96	_
TOURS, ESPIEL DOS., BRITIS TIS.	.9514	_
sis		-
worksb. Acetylsalicylcacid, USP (see Aspirin). Acetyltributyl citrate, bulk, l.o.b.	.97	- !
	1.28	_
Acetyltriethyl citrate, bulk, f.o.b. workslb.	2.06	_
Acrolan, lech , tanks, works ib. Acrylamide, solid, t.l. works ib.	.62	Ξ.
SOUT., 100% basis tarks, works ib.	1.00 .74	.77
Acrylic acid, glacial, reg., tanks, divdb.	.67	_
divd b. tech., tanks, frt. alid b. Acrytonitrile, tanks, works b.	.60	4514
Acrylonitale-butadiane-styrane resin.	.39%	.451/2
high-impact, nat., t.l., dms., civd	1.09	1.12
row-under, ratsame baus in	1.05 .98	1.08 1.01
Adipic acid, resin grade, buck, hopper cars, int. equaldb.	.57	
ogs., r.i., c.r int equalo	.59	-
Agar USP, powd., 60 to 100 mesh., dms	9.50	9.85
WUTKS	.38	_
C-14 to C-15 tecks divid	.57 .57	.59
C-16 to C-18, tanks, divd. ib. Aldehyde, C-6, dms. ib.	.60	
₩7. Qrns	4.10 1.95	6.70 -
	4 90	6.30
C-B, dras	4.30 4.30	5 25
C-8, drns	4.30	5.35
C-8, dras		5.35 3.63
C-8, dras. B. C-10 dras. B. Agin (see Socium atginate.) Alkali blue, dry, flushed, 110-lb, dras, divd. lb. Alkali blue prices 1c, higher W. of Rockies.	4.30	
C-8, drns	4.30 3.72	
C-8, drns	4.30	
C-8, drns	4.30 3.72 .87	
C-8, drs	4.30 3.72 .87 1.06 .90 5.50	
C-8, drs	4.30 3.72 .87 1.06	
C-8, drns	4.30 3.72 87 1.06 .90 5.50 3.90 .66	3.63
C-8, drns	4.30 3.72 .87 1.06 .90 5.50 3.90 .66 5.40	3.83 - - - 4.50 6.90
C-8, drns	4.30 3.72 87 1.06 .90 5.50 3.90 .86 3.60 10.)	3.63
C-8, drss	4.30 3.72 .87 1.06 .90 5.50 3.90 5.40 10.)	3.83 - - 4.50 6.90
C-8, drns	4.30 3.72 87 1.06 .90 5.50 3.90 .840 1.24 2.00 2.25 2.60	3.83 - - 4.50 6.90 3.60
C-8, drns	4.30 3.72 .87 1.06 .90 5.50 3.90 5.40 10.)	3.83 - - 4.50 6.90 3.60 1.50 2.76
C-8, drns	4.30 3.72 .87 1.06 .90 5.50 3.90 .66 5.40 1.24 2.00 2.25 2.60 3.00 6.00	3.83 - 4.50 6.90 3.60 1.50 2.75
C-8, drns	4.30 3.72 .87 1.06 .90 5.50 3.90 6.9 3.50 1.24 2.00 6.00 35.00	3.83 - 4.50 6.90 3.60 1.50 2.75
C-8, drns	4.30 3.72 .87 1.06 .90 5.50 3.90 .66 5.40 1.24 2.00 2.25 2.60 3.00 6.00	3.83 - 4.50 6.90 3.60 1.50 2.75

es in quantity, quality and id	, cutto		Ammonium bichromate, photo-litho		
ered by copyright.			grade, gran. 100-b, dms., l.t.l. worksb.	2.00	_
			Ammonium bifluoride, bgs., t.l.,		
ket reports is on the back c	over.		I warka ih	.70	-
			Ammonium bromide, dom. NF, gran.,	1.31	_
			dra, c.i., t.i., f.o.b. works . fb. Armmonium chioride, white, tech.	1.01	-
سيران فيوالي مربي عندي الرحيية		اسکرند	fine gren., bgs., c.l., works100ibs.		
Afurnine, activated, gran., 100-lb. bgs.,			works100lbs.	18.00	
40,000-lb. min. c.l., works. ton 8	21.00	-	USP, gran., dms b. Ammonium citrate, dibasic, 250-lb.	.40	.63
	54.00	-	dms.f.o.b. workslb.	2.79	_
100-lb. bgs., same basis ton 3 hydrated, white, bulk, same ba-	<b>90.08</b>	-	Ammonium dimolybdate, approx.		
8/9	90.00	-	Ammonium dimolybdate, approx. 85%, 24,000 bs. or more . lb.	5.48	-
100-lb.bgs., same basis ton 2	24.00	-	Ammonium fluoborate, tach., dma.,	4 70	
Aluminum acetate, basic, dms., I.o.l.,			G.i., t.i., works, int. equald ib.	1.79	-
works	3.25	-	Ammonium haptamolybdate, cryst., dms., 24,000 lbs. f.o.b.		
600 lb. dms., c.l., t.l., works,			[ WONGE	5.57	_
frt. egwald lb.	.63	-	Ammonium lauryi suitate, tanks, f.o.b.		
bulk same basis	.48	-	worksib. Ammonium lignin, sulfonata, bulk,	.29	.32
semi-bulk bins, seme basis  b. Aluminum chloride, comi., soln., 32°	.52	-	f.o.b. Hoquiam, Ore ton	72.00	_
tanks, works 100 lbs.	15.00	-	Ammonium nitrate, dom., fertilizer	, =.00	-
ret. dms., c.l., works 100 bs. non-ret. dms., same bests . 100 bs.	12.00	_	I drade, 33.5% N. bulk, S.E.		
non-rat. dms., same basis 100 lbs.	20.00	-	dlvdton	130.00	135.00
Aluminum formate, dibasic, iq. 8% Al <sub>2</sub> O <sub>2</sub> U., works	.55		Ammonium oxalate, tech., fine. gran. 300-lb. dms., t.l., f.o.b.		
Aluminum hydrate (see Alumina, bydrated)	.00	-	I WORKS	1.42	1.68
Aluminum hydroxide, dried, gel, NF.			Ammonium pentaborate oran, bos.,		
Afuminum hydroxide, dried, gel, NF, 75-lb. dms., c.l., t.l., works, lb. Afuminum metal, 997/25 or more, 50-lb.	2.75	3.50	C.I., WORKS	.75	-
			Ammonium pentaborate powder 20c. per b. higher.		
pige., 30,000-lb. lots, frt.	7Ř	_	Ammonium persuifate, 225-ib. dms.		
Aluminum oxide amorphous (see Alumina, Aluminum oxide amorphous (see Alumina, Aluminum paste, lealing grade, etd.,lining, 2,400 lb, lots, divd	calcined	).	24,000 lbs. or more, f.o.b.		
Aluminum paste, lealing grade,		•	worksth	.58	-
etd.,lining, 2,400 lb. lots,			DD-ID. Dgs., 88me Dasis   b.	.56%	<b>-</b>
Enlan mutro flam como buelo III	1.40 1.99	2.14	Ammonium phosphate (see Di- and ni phates).	OUGSTILLO	aum phos-
Aluminum phenoisulfonate, purif., 100-	1.05	2.14	Ammonium silicofluoride, dms. c.l., t.l.		
Aluminum phenolautionate, purif., 100- kio denationate, purif., 100- kio denationate, longer and	6.46	-	works	.30%	-
Aluminum powder, leafing grade, std. fining, 2,400 fb. lots, dvd. lb. extra fine, lining, same basis	0.47		Ammonium sulfate, ig. gran., bulk, c.l.,		
extra fine, ining, same basis	3.17 4.04	-	workston atd., coml., bulk, f.o.b. workston	80.00 60.00	90.00 70.00
Aluminum atearate, bgs., c1ib.	1.25	1,36	tech., bgs., c.l., t.l., works ton	108.00	120.00
Aluminum sulfate, comi., grd., 100 ib.	-		Ammonium sulfide, liq., 40-44% tanks		0.00
Akuminum atearate, bgs., cl ib. Akuminum atearate, bgs., cl ib. Akuminum atlate, comi., grd., 100 ib. bgs., cl., works, irt. equald., basis 17% Al <sub>2</sub> O <sub>3</sub> East and Guif Costete.			1 100% basis, int. equald too	460.00	-
Coasis	05.00	_	Ammonium sulfocyanide, tech. (see Am Ammonium thiocyanate, tech., cryst.,	monium thic	ocyanate).
West Court to 7	20.60	-	1 DOS., C.J., WORKS	1.02	_
MG., TAUNKAI, N.E. BAITHA DARLA ton 1	46.00	-	i lech soin., 50%, lanks, frt.		-
note tien, diff. offer or settle	00.03		l egysig	.93	-
	00.00 25.00	265.00	Ammonium thiosulfate, photographic, 60%, tanks, f.o.b. works ib.		
Aluminum sulfate, USP, gran., dms. b.		.337	Ammonium zirconyi carbonate, soin.,	.13	-
Aluminum sulfate, USP, gran, dms. b. Aminoacetic acid, USP, dms., 20,000 bs., I.o.b. works			1 Ouk	.72	_
tech., Li., same hade	2.12	-	ATTIVI ACETATE, Primary mixed isomers.		
tech., I.I., same basis	1.88	-	I tanka, divd	.57	-
more, ama., 1.0.b. works _ kin	9.60	10.10	Amyl alcohol, primary mixed isomers, tanks, frt. alid	4014	
2-Amino-4-chlorophenol dry and aid			I ANTIVI CITIYATUC AYDANYDA, daya III.	.461⁄≥ 2.35	2.50
14,000 lbs. or more, int. alid. b. Aminoethyl ethenolemine, tanks, frt.	5.79	-	I D-18/17-AMYIONATIOL BUILD WORKS IS	.91	1.03
	1.331/2	_	1 Panyina On, Orna Dr.	11.00	-
N-Aminosthyl piperazine, tanks, f.o.b., int. collect		-	Anathole, tech., dms. kilo USP, dms. ib.	10.20	-
int. collectb.	1.06	-	Angelica root oil, bots. kilo	3.85	4.60
5. CONTROL S. 61(1) A. 1 ' 9-DLD DBUBGIU!	4 60		ARIPPO, tanks, 1.0.b.	700.00 .33	.351⁄2
ame titah umba	1 1977	_	Anigo oil dime		.0072
dms., t.l. f.o.b. workslb.	1.82	_	Anise oil, draskilo	8.90	_

			والمتراوات والمتراوات والمتراوات والمتراوات	
no-2-methyl-1-propanol, 95%.			Aniso sood, Chinese, bgsb.	
dms., c.i., t.i., f.o.b. works . lb.	.95 .89	-		1.40 1.13
is, f.o.b. works	.00	_	Turkish, bgs. b. Anisic aldehyde, cns., dms. b. Anisidine imp. des. b.	1.10
N.C	3.95	-		4.80
nophenol, t.l. dms., f.o.b.	7.48		I P''' I SIMILIO, MID., CAST GAIA J	2.27
Raleigh, N.C kilo nosalicyllo acid, USP, 50-kilo	7.15	-	flakon engre basis	1.90
dma. t.l KIO	18.50	~	r reiodeirik olau, dunir sistemia a	2.26
nia, antryd., fertilizer, wholesale.				1.70
tanks, divd. Midwest termi-	105.00	170.00	dms ti works	
nais ton rkcars, f.o.b. Gulf Coast ton	165.00 80.00	170.00 85.00		3.02
ous, 29,4% NH <sub>2</sub> , gribyd, basis,	00.00	35,-5	I CHILDRE A LANGE THE PARTY OF	1.35
tanks, frt. equald. E. of Flock-			alid. E. of Rockies b. Antimony trichloride, anhyd., solid,	1.36
ies ton niscal liquor (see Ammonia, aque	260,00	315.00	I Uriis CJ. WORKS 6	0.00
niaceal, gaivanizing grade, bgs	onai.		I OPOURIUM INTROCOMONA NE NAS	08.E
c.l., f.o.b. works 100lbs	28.60	-	Apricot kernel oil, dras	16.00
niac sal. white (see Ammonium ch	nloride corr	ıl.).	I PIENE GUIII. DOWG., DOIS IL	2.05
nium biborate, gran., dms., c.i. worksb.	.90	_		1.85 2.00
onlum biborate powder 15c. per i		-		
nium bloarbonate, 300-lb. flb.			Aromatic petroleum solventa (see petroleum, aromatio).	Solveni. N
dms., c.l., works 100 lbs.	28.00	-	ATBONIC, CIUICIO (SOO ATBONICHIS MINVIOL	
, c.l	25.00	-	I AVVIID JOO (SOO NISHINA) SPJIId AAR	
grada, gran. 100-b, dms., l.t.l.			Arsentous trioxide, 99%, bulk, c.i., 1.o.b. warehouseb.	
works	2.00	-	ASCRETATE (See Faic, Tiprous).	.42
nium bifluoride, bgs., t.l.,	70		Ascorbic acid, USP, 100 kilos	
worksb. nium bromide, dom. NF, gran.,	.70	-	divdklio. Ash, black (see Barlum sulfide).	11.00
dms., c.i., t.i., f.o.b. works . fb.	1.31	-	Asphalt gilsonite, (see Gilsonite)	
nium chloride, white, tech.,			ANDOMI Detroleum Cuinack, Jacks E	
fine gren., bgs., c.l., works100lbs.	18.00	_	Coastgal emulsion, tanks, tankwagons, E.	.88.
, gran., dms b.	.40	.63	Coast	.88
nlum citrate, dibasic, 250-lb.			Coast	-00
dms.f.o.b. workslb.	2.79	-	tanks, tankwagonton	170.00
nium dimolybdate, approx. 85%, 24,000 bs. ormora . lb.	5.48	_	steep roofing grade, bulk tankwag-	175.00
nium fluoborate, tech., dma.,	0.40	_	Aspirin, USP, cryst., powd., 250-	170.00
c i., t.i., works, irt. equald lb.	1.79	-	10.cms., c.i., t.o.b	1.95
nium haptamolybdata, cryst.,			10% starch granulation, white, 250- lb. dm, c.l., l.o.b b.	1.97
dms., 24,000 lbs. f.o.b. workstb.	5.57	_	16% starch granulation, white, same	1.07
nium lauryi sulfate, tanks, f.o.b.			Dasis	2.80
works	.29	.32	Freight equald, shipt, identical quantity from N.Y., Phila., Midland, Mi	y Over standa ich Chiones
nium lignin, sulfonata, bulk, f.o.b. Hoquiam, Ore ton	72.00	_	Louis.	on, creceyo
nium nitrate, dom., fertilizer	72.00	-	Atropine sulfate, USP, bots oz.	10.00
grade, 33.5% N, bulk, S.E.			Avocado oil, dms	4.00
dividton	130.00	135.00	Azelaic acid, tech., 50-lb. ogs., t.l., c.l., divdb.	1.23
num oxalate, tech., fine. gran. 300-lb. dms., t.l., f.o.b.			Azo orange, bbls., dlvdb.	7.00
works	1.42	1.68	Azo yellow, 10 G, bgs., dlvd. E. of	0.05
nium pentaborate gran, bga.,			Rockiesb. Azo Gyellow pigment, bgs., same ba-	8.95
c.l., worksfb. onlum pentaborate powder 20c.	.75	-	sisb.	6 85
per b. higher.				
nium persuatata, 225-ib. dms.				
24,000 lbs. or more, f.o.b.				
worksib.	.58 .561⁄2	_		
nium phosphate (see Di- and n	יייטט. מוזורת בימוסח	nium phos-		
Drates).				
rium alicofluoride, dms. c.l., t.l.,	204			
worksib. nium sulfata, ig. gran., buik, c.i.,	.30%	-	Bacitracin, USP, non-aterile, one billion	0.00
works ton	80.00	90.00	units or more million units Barbital, NF, 50-kilo dms., divd kilo	6.30 22.50
comi., bulk, f.o.b. works ton	60.00	70.00	Barbital-sodium, NF, 50-kilo dms.	
., bgs., c.l., t.l., works ton nium sulfide, liq., 40-44% tanks.	108.00	120.00	divdklig	23.00
100% basis, frt. eguski,ton.	460.00	_	Barite, dry-grd., Southern, off-color,	.09
nium suitocyanide, tech. (888 Am	monlum th	ocyanate).	coerse, bgs., c.l., 1.o.b. mines b. water-grd., white, bgs., c.l.,	
num unocyanata, tech., cryst.,		-	f.o.b. works	.13
bgs., c.l., worksib. soin., 50%, tanks, frt.	1.02	-	unbleached, extra-fine, pigmant	160.00
echano	.93	_	grade, c.i., f.o.b. works ton Barium carbonate, precip., bulk, c.i.,	100.00
nium thiosulfate, photographic,			works, frt. equald b.	.25
60%, tanks, f.o.b. works lb. nium zirconyi carbonate, soln.,	.13	-	bgs., same basisib.	2512
bulkbu	.72	_	photo grade, bgs., same basis ton Barium chlorate, 100-lb. dms., 1-10	510.00
cetate, primary mixed isomers.		_	dm. lots, worksb.	1.04
tanks, divd	.57	-	Barium chtoride, tech., cryst., bgs., c.l.,	470,00
lcohol, primary mixed isomers, tanks, frt. alid	A014	_	workston	590.00
innamic ardenyde, dris lb.	.461⁄≥ 2.35	2.50	anhyd. drums c.l., same basis.ton Barlum chloride, purif., cyrst. 400-ib.	
∿mylphenol, bulk, workslb	.91	1.03	drns., works	3.76
oli, dms	11.00	-	Redum monohydreio, 55-lb, 208., Q.,	46.00
. Q/m8	10.20 3.85	4.60	t.l. f.o.b. works 100 lbs. octahydrate, cryst., bgs., same	
BIOOT OIL DOLSkiin	700.00	-1.00	MARIS	33.00
, tanks, 1.0.b	.33	.351/2	I Radium nitrale 11KHD, DOS., Uii	32.50
oil, dmskfo	8.90	-	works	
			الاجين والمراجع والمساخ والمساحة	

### **ABBREVIATIONS** THE TERMINOLOGY OF THE CHEMICAL MARKETPLACE

ASTM/American Soci-ety for Testing & Materials

1.1-p.a./tree from prusslc ackt
slc a

## 1. **Control of the control of th				
graphs ammentation of the control of		31.25	-	Borax, tech., gran., decahydrate,
Bardenins (1964, 1964, 10.0)	tota bina, sama basia,		-	tech., pentahydrate, gran. 991/96
### Baster affekt, USA '20' disappear and all and two).  ### states affekt, USA' 20' disappear and all and two).  ### states affekt, USA' 20' disappear and all and two).  ### states affekt, USA' 20' disappear and all and two).  ### states affekt, USA' 20' disappear and all and two).  ### states affekt, USA' 20' disappear and all and two).  ### states affekt, USA' 20' disappear and all and two).  ### states affekt, USA' 20' disappear and all and two).  ### states affekt, USA' 20' disappear and all and two).  ### states affekt, USA' 20' disappear and all and two).  ### states affekt, USA' 20' disappear and all and two).  ### states affekt, USA' 20' disappear and all and two).  ### states affekt, USA' 20' disappear and all and two).  ### states affekt, USA' 20' disappear and all and two).  ### states affekt, USA' 20' disappear and all and two).  ### states affekt, USA' 20' disappear affekt, believed affekt, usable and all and all and all and all all and all all and all all and all all all all all all all all all al	works bulk, t.l., f.o.b.		<u>-</u>	bulk, c.l., works ton
graph good. 28 Natio Ogh. (1,000) being jorder. (1,000) being jord	Bartun sulfate, tech. (388 Barrte and 198 Bartun sulfate, 1192 X-ray disonosia	inc fixe).		c.i., works,
Second Color   Seco	grade, powo., 26 kilo bys., To annikilo lota ib.	.681⁄2	-	Boron trichloride, CP, 1,800-lb, cyls.
Fired Composes	works		.90	works
Jasef A. Sprofiles and the control of the control o	French	.88. 55.00		Boron trifluoride, etherate, 500-in.
Table   Tabl	Basiloi, Egyptian		70.75	phenolate, 500-lb. dms., t.l., same
Specific So-SSS, dass. 5. 11.00 bg/se, richord, specific So-SSS, dass. 5. 11.00 gs/se, richord, specific So-SSS, dass. 5. 10 gs/se, richord, specific So-SSSS, dass. 5. 10 gs/se, richord, specific So-SS	8744-88% ALO3, Baldmore a Mobilemetric-ton	229.28	_	bulk, 45,000-lb, min., works lb.
## State   100-00   1	aa NF 50-55% 0M8		3.00	Bromine divd., prices for data, and bulk s
Second   S	bricks, 100-10. Ciris.			nigher for 30,000-lb. min. an
Secretary down c. b. bags. 1.0.b.  special process	yellow, bricks, 100-lb. ctns lb. velow, slabs, 100-lb. ctns lb.	3.00	3.10	Bromochloromethane, dma., c.l. f.o.b. Midland
set of the pick before the set of the pick set	Benfonite, dom., c.l. bags, 1.o.b. workston		_	1.4-Butanediol, tanks, f.o.b., frt.
Bearry Notice or Prize floor, Deligney Notice floor, Prize floor, P	ech .drisc.l. t.l		.83	Butene-1, tanks, f.o.b. works
Bason Rouge L. B	the Rockles.	o.b.		n-Butyl acetale, syn., tanks, frt. etd. ib. n-Butyl acrylate, tanks, frt. alld. E ib.
Coestationury, Ry. 981 97   Cococate Seyou, Tex. 981 87   Cococate Seyou, Tex. 981 87   Cococate Christ, Text. 981 87   Cococate Christ, 1000 Lbs. 67 6.20   MAD 100, 20 d. 1000 Np. 1000	Baton Rouge, Lagal. Baylown, Texgal.	.87 .87	-	frt. alidib.
Cocobies Beyou, Tex	Catlettsburg, Ky gal.	.87	-	tert-Butyl alcohol, syn., tanks, divd.
Corpus Christ, Tex	Chocolete Bayou, Tex gal.	.87		Butyl benzyl phthalate, tanks, frt.
Discognificacy B	Corpus Christi, Texgal. Deer Park, Texqal.	.87 .87	_	Dutyl chloride, lanks, works
### Secretary of the common and secretary of the common an	Lima, Ohio gal.	.90		n-Butyl ether, dris., c.i., t.i., works., ib.
Secretary slow. Alt., Dec. divid. b. 5.80 6.55  MAND, bgs., divid. b. 7.45 7.40  MAND, bgs., divid. b. 5.80 6.20  Beconfortopyroria, divid. b. 5.80 6.20  Beconfortopyroria, divid. b. 5.80 6.20  Beconfortopyroria, divid. b. 5.80 6.20  Broadpan, Surnatira. c. di. 1.73  Broadpan, Surnatira. c. di. 1.73  Broadpan, Surnatira. c. di. 1.80  Broadpan, Surnati	Berzena haxachloride, 99% gamma iso	mer (see Lit	rdane).	Butyl isodecyl phthalate, tanks, divdib.
Section   Sect	iq , containers, divd	3.36	3.89	n-Butyllithium, 15% soln., 1,000-lb.
Bezelegiropryone, ama. b. 12.50 Bezelegiropryone, ama. b. 12.5	AAOA, bgs., divd			tanks, 3,000-lb, min., 100% basis,
Berocherock tech, Dogs. c. L. L. J. L.D. b. works. works. b. 1.73 1.75 18 works. co. b. 1.73 1.75 18 works. c. b. 1.80 1.80 1.80 1.80 1.80 1.80 1.80 1.8	Berzoditydrogyrone.dmsib		11.50	Butyl methacrylate, tanks, frt.
Besopherone, N.F. 1,000 ibs. or more, for his price place is the control of the c	Berzolcadd, tech., bgs., c.l., t.l., f.o.b. works		.58	E
Becophence, N.F. 1,000 fbs. or more, 1.0.b. kg. 7.45 - kg. 1.00 kbs or more, 1.0.b. kg. 7.45 - kg. 1.00 kbs or more, rob. soft 1.00 kbs or more, soft 1.00 kbs. soft 1.00 kbs. or more, soft 1.00 kbs. sof	848		1.75	lanksib.
sit, 1,000 kbs or more, fob. kg. 7.45  21. Semplary disulfide (see Mercaptobenzothiazy) disulfide (see	Benzophenone, N.F., 1,000 lbs. or		- 3 RN	Butyl phthalate (see Dibutyl phthalate).
22. Passanibary dissulfide (see Mercaptobenzothiazy) dissulfide (see Mercaptobenzothi	kd. 1,000 kilos or more, f.o.b. kg.		-	or moreib.
services between the country of the	22. Serzetiazyi disulfide (see Merca	4.35 ptobenzoth	iazyi disul-	tanks
power, arra, 1,000 lbs. or more, samebasis. lb. 6.20 photograde, dms, 1,000 lbs. or more, same basis. lb. 9.90 photograde, dms, 1,000 lbs. or more, same basis. lb. 9.90 lbs., ark, ft. equald. lb. 87 lbs., ark, ft. equald. lb. 2.35 lbs., ark, ft. equald. lb. 2.35 lbs., ark, ft. equald. lb. 2.35 lbs., ark, ft. equald. lb. 1.71 lbs. ark, ft. equald. lb. 1.71 lbs. ark, same basis. lb. 1.20 lbs., ark, ark, ark, ark, ark, ark, ark, ark	Berzonazole, flake, dms., 1,000 lbs.	6 10	_	terr-Butylamine, dris., c.l., t.l., f.o.b.
protegrate, driss, 1,000 lbs. or more, seme beasts in 8,900 - secundidoide, refid. dim. t.l., frt. squald. ib. 867 - shart, it squald. ib. 867 - shart, it squald in 1,000-lb. tots or more, bgs. works, frt. equald in 1,000-lb. tots or more, bgs. works, frt. equald in 1,000-lb. tots or more, bgs. works, frt. equald in 1,200 shart, it squald in 1,200 shart, it same basis in 1,320 shart, it squald in 1,200 sh	same basis		_	tanks, same basisib. Butylated hydroxyanisole, food grade,
ans. fri. equals   b. 67 - 58   constitution   constituti	more same basis	9.90	-	Butylated hydroxytoluane, food, lead
says border of the service of the se	lanks, fri, equald		-	tech., bgs., c.l., t.l., dlvd lb. 1.3-Butylene glycol, tanks, dlvd lb.
incurrent poliur gran.  10,000 lb. tots or more. Dige.  works, frt. equaid.	lands, int. squald	.57		Butyraldehyde, tanks, divd
pass, 50% and 55% formulations, drus, palls, fir equald. b. 1.20 2.60 larks, same basis b. 1.20 2.60 larks, same basis b. 1.26 1.85 larks, same basis b. 1.37 1.43 pixo grade, t.l., dms., same basis b. 1.37 1.43 lich grade, t.l., dms., same basis b. 1.34 larks, same basis b. 1.32 larks, same basis b. 1.26 larks, t.ms., b. 1.66 2.26 larks, t.ms., b. 1.66 2.26 larks, t.ms., b. 1.65 larks, t.l., dms., same basis b. 1.30 larks, t.ms., b. 1.66 larks, t.ms., b. 1.65 larks, t.l., dms., d	10,000-lb. tols or more bos	2.05	0.00	Butyrolactone,tanks, f.o.b. plant lb. n-Butyronitrile, dms., c.l., d/vd lb.
Sany sicchol, N.F. L.I. drns. frt. elak. 1.86 1.86 1.86 1.37 1.43 pote grade, L.I., drns., same basis ib. 1.40 - 1.34 task, same basis ib. 1.32 task, same basis ib. 1.34 task, same basis ib. 1.34 task, same basis ib. 1.35 task, same basis ib. 1.34 task, same basis ib. 1.34 task, same basis ib. 1.35 task, same basis ib. 1.34 task, same basis ib. 1.35 task, same basis ib. 1.32 task, same basis ib. 1.32 task, same basis ib. 1.32 task, same basis ib. 1.34 task, same basis ib. 1.35 task, same basis ib. 1.32 task, same basis ib. 1.32 task, same basis ib. 1.32 task, same basis ib. 1.33 task, same basis ib. 1.32 task, same basis ib. 1.32 task, same basis ib. 1.32 task, same basis ib. 1.33 task, same basis ib. 1.33 task, same basis ib. 1.34 task, same basis ib. 1.32 task, same basis ib. 1.33 task, same basis ib. 1.34 task, same basis ib. 1.35 task, same basis ib. 1.34 task, same basis ib. 1.35 task, same basis ib. 1.34 task, same basis ib. 1.35 task, same basis ib. 1.34 task, same basis ib. 1.35 task, same bas	dms palls in aquality			tanks, divd ,
ploto grade, LL, dms, same basis ib. 1.40  Janks, same basis ib. 1.40  Janks, same basis ib. 1.26  Baryl beroards, LL, dms, same basis ib. 1.82  Baryl beroards, etch, non-real, dms, cl., Ll, virt, equald, ib. 56  Baryl coloride, tech, non-real, dms, cl., Ll, virt, equald, ib. 56  Baryl coloride, tech, non-real, dms, cl., Ll, virt, equald, ib. 56  Baryl formatis, 25-lb, cns, ib. 8.50  Baryl formatis, 25-lb, cns, ib. 8.50  Baryl formatis, dms, ib. 10.50  Baryl formatis, dms, ib. 10.50  Baryl formatis, dms, ib. 15.50  Baryl sackglate  Baryl sackgl	Benzyl sicohol, N.F. L.I. dans for	1.20	2.60	
lanks, same basis   1.34	lanks, same basis photo grade, t.l., dms., same, be-			
tanks, same basis.  1.28 Baryl chioride, stoh., non-ret. dins. C1, L1, rit. equald. b. 1.65 Baryl-bacoate, drns. b. 1.65 Baryl-l-bacoate, drns. b. 10.60 Baryl-l-bacoate, drns. b. 10.60 Baryl-bacoate, drns. b. 10.60 Baryl-bacoate, drns. b. 10.50 Baryl-bacoate, drns. b. 2.90 Baryl-bacoate, drns. b. 2.90 Baryl-bacoate, drns. b. 2.95 Baryl-bacoate, drns. b. 2.95 Baryl-bacoate, drns. b. 2.95 Baryl-bacoate, drns. b. 10.00 Baryl-bacoate,	lanka, sarna houle		-	
larika (L.D., int. equald. b)59 -Banzyl-M. Ndimethylamtine . t.l. Berylformers dms. b. 8.50 8.95 Banzyl-M. Ndimethylamtine . t.l. Berylformers dms. b. 15.50 - Banzyl-M. Ndimethylamtine . t.l. Berylformers dms. b. 15.50 - Banzyl-M. Ndimethylamtine . t.l. Berylformers dms. b. 15.50 - Banzyl-M. Ndimethylamtine . t.l. Berylformers dms. b. 15.50 - Banzyl-M. Ndimethylamtine . t.l. Berylformers dms. b. 15.50 - Banzyl-M. Ndimethylamtine . t.l. Berylformers dms. b. 15.50 - Banzyl-M. Ndimethylamtine . t.l. Berylformers dms. b. 15.50 - Banzyl-M. Ndimethylamtine . t.l. Berylformers dms. b. 15.50 - Banzyl-M. Ndimethylamtine . t.l. Berylformers dms. b. 15.50 - Banzyl-M. Ndimethylamtine . t.l. Berylformers dms. b. 2.95 3.25 Banzyl-M. Ndimethylamtine . t.l. Berylformers dms. b. 2.95 3.25 Banzyl-M. Ndimethylamtine . t.l. Berylformers dms. b. 2.95 3.25 Banzyl-M. Ndimethylamtine . t.l. Berylformers dms. b. 2.95 3.25 Banzyl-M. Ndimethylamtine . t.l. Banzyl-M. Ndimethylamtine . t.l. Berylformers dms. b. 10.00 - Banzyl-M. Ndimethylamtine . t.l. Banzyl-M. Ndimethylamt	tanks, same basis. Benyibenzoste desig	1.26	-	Cadmium chloride, purif. cryst., 100- lb. dms., Li., works lb.
Serylcinamata, 25-b. cns.   b.   5.54   Serylcinamata, 25-b. cns.   b.   8.50   Serylcinamata, 25-b. cns.   b.   8.50   Serylcinamata, 25-b. cns.   b.   2.30   Serylcinamata, dms.   b.   2.30   Serylcinamata, dms.   b.   2.30   Serylcinamata, dms.   b.   2.50   Serylcinamata, dms.   b.   3.35   Serylcinamata, dms.   b.   2.90   Serylcinamata, dms.   b.   2.90   Serylcinamata, dms.   b.   2.95   Serylcinamata, dms.   b.   2.95   Serylcinamata, dms.   b.   2.90   Serylcinamata, dms.   b.   b.   0.00   Serylcinamata, dms.   b.   0.00   Serylcinamata, dms.   b.   0.00   Serylcinamata, dms.   b.   0.00   Serylcinamata, dms.   b.	CL. L. frt ormald		2.26	Cadmium, CP, red, dark shade, bbls., 100-lb. lots, frt. alki., E. of
mas. 1.0.b. works b. 10.50 - Servitomete, dms. b. 15.50 - Servitomete, dms. b. 3.35 - Servitomete, dms. b. 3.35 - Servitomete, dms. b. 2.90 3.25 - Servitomete, dms. b. 2.90 3.25 - Servitomete, servitomete, decide, deep converse, decide, dec	enzyldrinamete as is	.54	9.95	light shade, bbis., same basis Ro.
any propionate, dma. b. 3.35 — Rockles.  Sary propionate, dma. b. 3.25 — Rockles.  Sary propionate, discovery propionate discovery propionate discovery propionate, discovery propionate discovery pro	dima., f.o.b. works Ib.	2.30	-	medium-light shade, bbis., same ba-
Sanyfafre acetone, cns., bots. ib. 2.90 3.25 Saryfafre acetone, cns., bots. ib. 2.95 3.25 Saryfafre acetone, cns., bots. ib. 10.00 Saryfafre acetone, cns., bots. ib. 2.95 Saryfafre acetone, cns., bots. ib. 10.00 Saryfafre acetone, cns., bots. ib. 2.95 Saryfafre acetone, cns., bots. ib. 10.00 Saryfafre acetone, cns., bots. ib. 10.00 Saryfafre acetone, cns., clo., bots., acetone, cns., clo., bots., saryfafre acetone, cns., clo., bots., saryfafre acetone, cns., clo., cns., cn	DOLLA HOLD AND AND AND AND AND AND AND AND AND AN	tyl-m-creso 15.50	D	100-10. 10ts, 1rt. 8kg., E. Of
Sergand of Sergand of Milo 44.75  Betalhydraynaphthole acid (see b-Oxynaphthole acid).  Both cryst. 500 gms. or more gm. 5.00 5.50  Both cryst. 500 gms. or more gm. 5.00 5.50  Both cryst. 500 gms. or more gm. 5.00 5.50  Both districts purif. cryst 100-  Both districts purif. cryst 100-  Both districts purif. 100-b. dms.  Both districts NF powd b 17.20  Both subgallate purif 100-lb.  Gms. works b 10.50  Both subgallate purif 100-lb.  Gms. works b 14.45  Both districts NF powd b 17.00  Both subgallate purif powd.  Both subgallate purif powd.  Both districts NF powd b 17.00  Both districts NF powd.	Benzyi salicylate lb.	3.35 2.90		Cadmium fluoborate, ilq. conc., dms., t.i., works, irt. equaldib.
samuli nitrate, purif. cryst. 100- b.dma., frt. equaid. b. 10.00 – b.dma. mrt. equaid. b. 10.00 – b.dma. morks. b. 17.20 – b.dma. subgallate. purif. 100-ib. dms. works. b. 15.31 15.50 b.dms. works. b. 10.50 – b.dms. works. b. 10.50 – b.dms. works. b. 10.50 – b.dms. works. b. 14.45 – b.dms. works. b. 17.00 – cars. dwd. gms. works. l. b. 17.00 – cars. dwd. gms. works. l. b. 17.00 – cars. dwd.	Betshirtown	2.95 44.75 aschtholog	3.25 	medium-light shade, bbls., same ba- sis
works.  works.  works.  barnan subcarbonate, USP, medium powd., 225-lb. dms., works. lb. barnan subcarbonate, USP, medium dms., works.  barnan subcarbonate, purif., 100-lb. dms., works.  barnan subcarbonate, purif., 100-lb. dms., works.  barnan subcarbonate, purif., 100-lb. dms., works.  barnan subcarbonate, powd., 100-lb. drs., alid. E. of Rocides. deep ahade, bbls., same basicht thropone, or shade, bbls		5.00	5.50	shade, bbis., frt. akt. E. Of
Description of the property of	Addition that the second secon	10.00		Cadmium metal indots or sticks, ton
drs., works. b. drs., works. b. 10.50  Bandh subgillate. purif. 100-lb. drs., works. ceep ahade, bbis., same basis same basis port from the same basis loylate, purif. powd., 200-lb. drs., works. b. 14.45  Bandh subsilloylate, purif. powd., 200-lb. drs., works. b. 17.00  Bandh subsilloylate, purif. powd., 100-lb. drs., works. b. b. 15.00  Bashanel A. epoxy grade, hopper cars, dlvd. b. 6.77  Bos derose of, Braz. drs., b. 20  Bos derose of, Braz. drs., b. 20  Bos derose of, Braz. drs., b. 6.75  Bos derose of, Braz. drs., b. 6.50  Bos phosphate, dom, bgs., c.l., b. 6.50  Bos phosphate, defluorinated of lime (see Defluorinated britasio).	Subcarbonate Lien	17.20	-	Cadmium nitrate, purif., flake 400-lb. dma., c.i., t.i., f.o.b. ship. pt.lb.
desparable, local power, works. b. 14.45 — shade, bbls., earne basis by take, works. b. 17.00 — should have been basis by take, bols., as the basis by take, b	DIMUM BURGALLAND MOLKS. ID.	15.31	15.50	light shade, bbis., 400-lb. lots. (rt, elid. E. of Rockles lb.
shade, bis., same basis b. 71 - 80 - 80 - 80 - 80 - 80 - 80 - 80 - 8	Subnitrate NF, powd. 200-lb		-	deep shade, bbis., same basis lb. Cadmism-selenida lithopone, rad, dark
als. D. dne., works. D. D. 15.00 16.45 b. dne., works. D. D. 15.00 16.45 csp. dne., works. D. D. 15.00 16.45 medium shade, bbis., same base, process, dne., page D. D. 20 Cadmium-selenide litinopore, yet shades, bbis., same base, press, dne., page D. D. 20 Cadmium-selenide litinopore, yet shades, bbis., same base, press, dne., page D. D. 20 Cadmium-selenide litinopore, yet shades, bbis., same base, press, same base, press, dne., bb. 20 Cadmium-selenide litinopore, yet shades, bbis., same base, shades, bbis., shades, bbis., same base, shades, bbis., same base, shades, bbis., same base,	Subsalicylate, purif powd		-	shade, bbts., same basis
cars divid. Y saus, nopper cars divid. Y saus cars basis ib. 87 cars basis ib. 71 cars basis ib. 71 cars basis ib. 71 cars basis ib. 72 cars basis ib. 80 cadmium selende lithopone, yet shades, bibs., same basis cars basis ib. 87 cars basis cars basis ib. 87 cars basis ib. 80 cadmium selende lithopone, yet shades oil. 80 cadmiu	B-spherol-A, epoyu greet b.		15,45	ala
BON forer (red 48) dans. frt. alid. B. 7.25 8.05 (red 52) das., same basis. B. 6.75 - 5.50 (red 52) das., same basis. B. 6.50 7.90 (red 64) dans. frt. alid. B. 7.25 8.05 (red 52) das., same basis. B. 6.50 7.90 (red 64) day. Bone phosphate, defluorinated of lime (see Defluorinated basis, phosphate, precip. (see Calcium phosphate tribasio).	polycarbonate grade, same beein ib.	.67	-	marcon shade, bbs., same basis.ro. Cadmium-acienide lithopone, yellow, all
Some phosphate). Some phosphate process (see Calcum phosphate tribasio). Calcum of the phosphate control (see Calcum phosphate tribasio). Calcum of the phosphate control (see Calcum phosphate tribasio). Calcum of the phosphate control (see Calcum phosphate tribasio). Calcum of the phosphate control (see Calcum phosphate tribasio). Calcum of the phosphate control (see Calcum phosphate tribasio).	BON Jones (red. Brez., dims. 9)	.20	-	Cadmium sulfate, 50-lb. dms., any cusnitiv. 1.o.b. ship. pt fb.
to Newst plants ton 180.00 180.00 Imp. cryst, shiyd, powd. phosphate, defluorinated of lims (see Defluorinated 10,000 be, or more. 10,000 be, or m	Somemeal, steamed, down born	7.25 6.50	7.90	I Callaba dom 1189 svn civst. Mi-
ten, arrhyd. 99%, bos. C. I phosphate tribasio). Calamus oli, dms.	Bone phosphate, defluodosted to ton	180.00	190.00	Imp., cryst., sanya.; powa.; orie.,
works. Dgs. c.l., ton 647.00 Celdierol, (see Ergocaldierol), ton 602.00 Celcium acetate, purif, powd.	Mary Jech William ! (889 Calcini)	no (see 126 Dhosphata t	ribasio).	Calamine, USP, dms
this could be the think the control of the control	works	647.00		Caldiferol, (see Ergocalclierol). Calcium écétate, purif., powd., dois.
	100	002,00	•	Calcium écétate, purif., powd., dos.

Borns, Nell County Services, 1979, 1989, 1	Ĭ	991/2% bgs., c.l., works (on	237.00	_	Calcium carbide, std., generator size,	
Borra Cell Float Scotta Company 1995 (1995). Berra Cell Float Scotta Company 1	ŀ	tech., pentahydrate, gran, 901-94	192.00	-	bulk, c.l., f.o.b., works, ton Calcium carbonate, pulverized, 325-	40
Security Not Sees Scholam Dorated Scholam Control Security Scholam Securit	1	DUIK, C.I., WORKS MAD		- '	WOKS ton	4
Borron Infoliation, G.P. 1, 100-0. 10		Boric acid, tech., gran., 99,9%, has			alumba, 54% solids, Barna basis ton	97
Seron influence, Sch. 2, sp. 1, 1, 2, b. 1, 5, b	]	bulk, c.l., works ton		-	/276 SOIKIS, SAME basis Inn	10
Sortion millordes, 9-th project, 1,1,1,0,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,		works CP, 1,800-lb. cyls.,		-	8ton	10
Source, stampbasis (1). 3, 47 phomotels, 500-b. Care, 11, series  Browniers, 500-b. Care, 11, series  Browniers, 12, 11, 11, 11, 11, 11, 11, 11, 11, 11	Ì	boron (millionae, 80-lb. cyls., t.l., f.o.b.		_	WORKSih	
mm. I. I. f. ch. works b. 1. b.		Oulk, same basis		-	Cl., t.L	38
Basis	ĺ	OMS., f.l., f.O.b., works In	2.35	_	Ceicium cerbonate precio, medium	11
Servins, Crim. L. v. vorins	J	phenolate, 500-lb. dms., t.l., same basis	1.65	-	precip. dense. bgs., c.l., surface	
Bottmer de Conde centre au ein de Bottmer de Conde Con	1	Dioming. ams i.i., works is	.87	3414	uitrafine, USP, bgs.,	26
Accident protein grant plants in protein grant of the 15 (200-b. m.)  Brown (15 (200-b. m.)	-	PUM T.I. and	76		Calcium chioride, conc., reg, grade, 77-	21
Higher for 15,000-b. min.   100-b.	1	rg Der-ID. Higher, Bluk i. t. m//	394 1c m 71	Ar -ner-th	ì 80%, flake, bulk, c.i.,	15
Bediense Mediand   D.   122   13   14   15   15   15   15   15   15   15	- [	HIGHER BY 13.0001-10.7mm	IC 4C. TO 5	vzoper-10.	100-10. bgs., c.l., same	19
1.49 utanheldel, lamks, f.o.b., fr. continue of the continue		Midiand			annyd., 94-97%, flake or pallet, bulk,	
Catchinar chotches, purel, service, strict, and purel control to the control of t	[	1.4-Butanedici, tanks, f.o.b., frt.	-	.13	i 60-to. bos., c.i., same basis ton	27
Restryk accestab, grift, tarka, rit did.lb.  Restryk accestab, grift, tarka, in the did.lb.  Restryk accestab, grift, tarka, did. b.  Sec-Buryl accestab, grift, tarka, did. b.  Ser-Buryl phrihatele, tarka, did. b.  Buryl accest grift, tarka, did. b.  Buryl accest grift, grift, tarka, did. b.  Buryl accest grift, grift, cryst. 100-b.  Destryk grift, gr		dma., same basis	.86	-	Calcium chioride, liq., 100 percent ba-	
neutry acryste, larkar, int. aid.  - Butyl acryste, parkar, int. aid Butyl acryste, parkar, tarist, divid Butyl acryste, parkar, tarist, divid Butyl acryste, service, a. D Butyl	ı	n-Butyl acatata, syn., tanka, frt. ald jb.			45% same basis	- 11
Brit selder seld	١	n-Butyl acrylate, tanka, (rt. alid, E lb.	.69	-	Calchim chloride, USP, gran., 225-lb.	
bert-Butyl alcohol, year, tanke, divd.  Butyl schoring pithrataile, sands, ib. Butyl chloride, tarks, works.  Butyl chloride, tarks, works.  Butyl chloride, tarks, works.  Butyl schore, cycl.  Butyl	- (	frt. alid ib.		_	Calcium citrate, purif., 200-ib. dms.,	
Burly activity (accessed primariates, mans, 1r. 58 and purity learning primariates, mans, 1r. 58 and purity colorists, primariates, mans, 1r. 58 and purity scores primariates, mans, 28 and 28	ı	tert-Butyl alcohol, syn., tanks, divd.		_	workslb.	
Budy chordinds, barks, works. Ib. Be 1,00 Budy in cyclosacy princhaelas, sanks. Ib. Be 1,00 Budy is cyclosacy princhaelas, sanks. Ib. Be 1,65 Budy methacrylates, cyclos. IDCh. Be 1,475 Budy methacrylates, tanks, id. Be 1,475 Budy methacrylates, tanks, id. Be 1,475 Budy feet princhaelas, sanks. Ib. Be 1,75 Jert-Budyphanol, lambs works as Ib. 1,75 Jert	- (	Butyl aldehyde (see Butyraldehyde)	.70	-	dms., works	44
Butyl expotology phthelates, tanks, divid. D. 1.69 of Butyl selberg days. J. 1.00 bits of Butyl selberg britishes. Butyl selberg selberg days. J. 1.00 bits of Butyl selberg britishes. Butyl selberg selberg days. J. 1.00 bits of Butyl selberg selb		alid		4-00	<ul> <li>Galctum gluconate, USP powd. t.l  b.</li> </ul>	
Butyl series, draw, ct. 1.1, works. ib. 1.85 Butyl series, price, price is anice, forb. works ib. 1.55 n-Butylistates, parks. forb. works ib. 1.55 boss, chd. dr. ob. 1.50 butylistates, parks. forb. works ib. 1.55 butylistates, parks. forb. works. ib. 1.55 butylistates, parks. forb. works. ib. 1.55 butylistates, parks. forb. works. ib. 1.55 Butyl corply printelles, tranks. forb. 28 Butyl corply printelles, tranks. ib. 1.60 Butyl corply printelles, tranks. ib. 1.60 Butyl corply printelles, tranks. ib. 1.60 Butyl corply printelles (parks. ib. 1.60 Butyl corply printelles (parks. ib. 1.60 Butyl corply printelles (parks. ib. 1.60 Butylistates, ib. 1.60 Butylistat	ļ	Butyl cyclohexyl phthalete, tanks,		1.00	1,000-fb, lots, works, lb.	1
Butyl sandscyl phthelate, tanks, b. 35 - nButylacidis, tanks, 10.b works, b. 1.55 - bease, chvd. 1.00		n-Butyl ether, dnis., c.i., t.i., works., ib.		Ξ	truckloads ship.t. E. of Rock-	
n-Butyl lactate, tanks, f.o.b. words. Ib. 15.5 hots or more, cyts. 100-b. hots or more cyts. 11.75 hots of the cyts of the cyts. 11.75 hots of the cyts of the cyts of the cyts of the cyts of the cyts. 11.75 hots of the cyts of the cyts. 11.75 hots of the cyts of the cyts. 11.75 hots of the cyt	- [	Butyl isodecyl phthalate, tanks, divdib.		_	Calcium hypophosphite, dms., bulk,	
lobts or more, cyles, 100% bests, 200% bests, dast, drive, 100% bests, dast, 3,000-b, min, 100% bests, 14,75 buryl crost phribates, tanks, 1rd, 88 buryl codyl phribates, tanks, dwd E. Buryl codyl phribates, bests, dws. dws. dws. dws. dws. dws. dws. dws.		n-Butyl lactate, tanks, f.o.b. works . ib.		-	Calcium locate, FCC dms., f.o.b.	
tanks, 3,000-b. min., 100% basis, 14,75 Butyl methacylistes, tanks, 1rt, 28 Bunyl corpi, prihabele, tanks, 1rt, 29 Bunyl corpi, prihabele (see Bibutyl prihabele) Butyl stears and bosenetic, clim, 17 or 3- Bunyl prihabele (see Bibutyl prihabele) Butyl stears and bosenetic, clim, 17 or 3- Bunyl stears and bosenetic, clim, 17 or 3- Bunyl stears and bosenetic, clim, 18 Bunylated hydroxynolusne, food, feed years, 19 Bunylated hydroxynolusne, food, 18 Bunylated hydroxynolusne, food, 18 Bunylated hydroxynolusne, food, 18 Bunylated hydroxynolusne, food, 18 Bunylot acid, tanks, 1rt, atid, 18 Bunylot acid, tanks, 1rt, acid, 18 Bunylot acid, tanks, 1rt, atid, 18 Bunylot acid, tanks, 1rt, atid, 18 Bunylot acid, tanks, 1rt, atid, 18 Bunylot acid, tanks, 18 Bunylot acid, 18 Bunylot acid, 18 Bunylot acid, 18 Buny	- (	lots or more, cyls., 100% basis, divd	15 45	-	worksb. Calcium lodide, 50-kilo dms., f.o.b.	
Butyl methacryletze, tanks, ich. Butyl cotyl phthielete, tanks, dvb. Butyl cotyl phthielete, tanks, dvb. Butyl phthelete (see bibutyl phthelete). Butyl phthelete (see bibutyl phthelete). Butyl phthelete (see bibutyl phthelete). Butyl steeral becometic, dm. 7 dms. or more. Butyl steeral becometic, dm. 8 dm. 9 dm. 1.31 betwice dm. 1.32 betwice dm. 1.32 betwice dm. 1.32 betwice dm. 1.34 b		1anks, 3,000-tb. min., 100% basis,		_	workskiid	)
Buyl octyl phthelste, tanks, dvd. Buyl phthelste (see Dibutyl phthelste). Buyl stearate bosmetic, dme. 77 dms. Or more. Buyl stearate bosmetic, dme. 77 dms. Buyl stearate bosmetic, dme. 78 dms. Buyl stearate bosmetic, dme. 85 dm. Buyl stearate bosmetic, dme. 1.31 dms. burlsteat bythoroxysnisole, food grade, dmr., dwd. Buylsteat bythoroxysnisole, food grade, dmr., dwd. Buylsteat bythoroxysnisole, food grade, dmr., dwd. Buyl buylor deliver (see Steph bullysteat) Buylyradiolnyde, lamks, dwd. Buylyradiolnyde, lamks, dw	-	Butyl methacrylate, tanks, frt.	-	_	drate, dms , 24,000 lbs. or	1
larits.    b		Butyl octyl phthalate, tanks, divd.			NF, gran., trihydrate, same basis. ib	
Devis pitchine (see) Educy at elearate (sech. Lt. b. 56 of 22 starks. s. b. 52 starks. s. b. 50 starks. s	1	Butyl cleate, dist., dms., c.l lb.	.70	.82	) sisb	
Buyly sternate cosmetic, dime. 77 drim. 9 1 97 tanks.   Buyl sterate tech. Lt.   B.		g-tert-Butylphenol, tanks works lb.		./5 -	Calcium naphthenate, iq., 4% Ca., c.i. f.o.b. plant, E. of Rockles lb	Ĺ
tranks. Buyst earned tech., LL. B. Buyst earned tech., LL. Buyst earned tech., LL. Buyst earned tech., LL. Buyst earned tech., LL. Buyst earned yearned, but the second of		Butyl stegrate cosmetic, dms., 77 dms.	04	67	d-Calcium pantothenate, USP, 100 500-kilo lotskili	-
tanks Butylamine (see Mono-Di- and Triburylamine), terrEturylamine, dime. c.l., t.l., (b. b., b., works. b. b. 1.31 works. b. b. 1.32 works. b. b. 1.32 works. b. b. 1.30 lab. works. b. b. 1.32 works. b. b. 1.30 lab. works. b. b. 1.31 works. c.l. b. b. b. 1.32 works. c.l. b. b. 1.32 works. c.l. b. b. 1.33 works. c.l. b. b. 1.34 works. c.l. b. b. 1.35 works. c.l. b. b. 1.35 works. c.l. b. 1.30 works. c.l. b		tanksib.	.92	_	di-Calcium pantothenate, feed grade	
tert-Burylamhe, dime. c.l., Ll., fo.b. works. b. tanks, same beals. b. 1.31  Burylated hydroxynoluses, lood grade, Burylated hydroxynoluses, tood, led grades, cl., Ll., bydr. b. 1.24  1.3 Burylater hydroxynoluses, tood, led grades, cl., Ll., bydr. b. 1.24  1.3 Burylater hydroxynoluses, tood, led grades, cl., Ll., bydr. b. 1.24  1.3 Burylater egilcot, tanks, divd. b. 259  1.3 Burylater egilcot, tanks, divd. b. 259  1.3 Burylater egilcot, tanks, divd. b. 259  1.4 Burylater (see Erryl burylate). b. 249  1.5 Burylater (see Erryl burylate). b. 249  1.6 Burylater (see Erryl burylate). b. 249  1.6 Cadmium chloride, purif. cryst. 100-b. dimstl., works, 1.5 b. 24  1.6 Cadmium Chloride, purif. cryst. 100-b. dimstl., works, 1.5 b. 24  1.6 Cadmium Chloride, purif. cryst. 100-b. dimstl., works, 1.5 b. 24  1.6 Cadmium Rade, bbis, same basis. b. 10.59  1.6 Cadmium Rade, bbis, same basis. b. 10.59  1.7 Cadmium Rade, bbis, same basis. b. 10.59  1.8 Cadmium ritirate, purif., false d. coft Rockies. b. 10.50  1.8 Cadmium ritirate, purif., false d. coft Rockies. b. 10.50  1.8 Cadmium ritirate, purif., false d. coft Rockies. b. 10.50  1.8 Cadmium ritirate, purif., false d. coft Rockies. b. 10.50  1.8 Cadmium ritirate, purif., false d. coft Rockies. b. 10.50  1.8 Cadmium ritirate, purif., false d. coft Rockies. b. 10.50  1.8 Cadmium ritirate, purif., false d. coft Rockies. b. 10.50  1.8 Cadmium ritirate, purif., false d. coft Rockies. b. 10.50  1.8 Cadmium ritirate, purif., false d. coft Rockies. b. 10.50  1.8 Cadmium ritirate, purif., false d. coft Rockies. b. 10.50  1.8 Cadmium ritirate, purif., false d. coft Rockies. b. 10.50  1.8 Cadmium ritirate, purif., false d. coft Rockies. b. 10.50  1.8 Cadmium ritirate, purif., false d. coft Rockies. b. 10.50  1.8 Cadmium ritirate, purif., false d. coft Rockies. b. 10.50  1.8 Cadmium ritirate, purif., false d. coft Rockies. b. 10.50  1.8 Cadmium ritira	. {			.62 .58	more kili	
tanks, asrar beasis.  Buylated hydroxynitoures, food grade, draw, dwd.  Buylated hydroxynitoures, food, leed etc., bgs., cid., L., bgs., dwd., b.  Buylated hydroxynitoures, food, leed etc., bgs., cid., L., bgs., dwd., b.  1.24 1.30  1.38-tuylaren glycot, tarink, cid., b.  2.41 1.30  1.39-tuylaren glycot, tarink, cid., b.  2.41 1.30  2.41	-	tert-Butylamine, dms., c.i., t.i., f.o.b.			ride complex, feed grade, 16	0
Bulyfated hydroxytolusne, tool. b. 8.80 8.85 Bulyfated hydroxytolusne, tool. b. 8.80 8.85 Grade, cl. Lt., bgs., cl. d. b. 1.24 1.30 tech., bgs., cl. Lt., bgs., d. b. 1.24 1.30 tech., bgs., cl. Lt., bgs., d. b. 1.24 1.30 Bulyfraded hydrosteric glycol, tanks, d. d. b. 1.29 3.8 Bulyfraded, tanks, firt, alid., b. 44v2 Bulyfraded hydroxytolusne, b. 1.20 n-Bulyfraded hydroxytolusne, b. 1.20 lib. draw, t. L., works, 1.20 lib. draw, t. L., works, 1.20 lib. draw, t. L., works, 1.20 n-Bulyfraded hydroxytolusne, b. 1.20 n-Bulyfraded hydroxytolusne, b. 1.20 lib. draw, t. 1.20 lib.	}	tanks, same basisib.		2	grams per (b., f.o.b., frt. alid. 500 lbs or more	),
Buylated hydroxytoluane, food, feed grades, cl. Ll., bys., divid. ib. 1.24 1.30 tech., bgs., cl. Ll., divid. ib. 1.24 1.30 tech., bgs., cl. Ll., divid. ib. 1.24 1.30 Buylradehyde, tanks, divid. ib. 29½ 38 Buylradd, tanks, firt. alid. ib. 44½ 50 depth of the see Ethyl butyrate). Buylradort, ethys, 1.0. b, bent. ib. 54 51 danks, divid. ib. 54		Butylated hydroxyanisole, food grade, drns., divd	8.80	8.85	Galcium phosphate, dibasic, feed grade, 18½% P. bulk, c.l., t.l.	d
tech. bgs., cl. Li, divid. 1.3-Butyriade glycol, tanks, divid. 1.2 Butyriade glycol, tanks, divid. 1.2 Butyria ether (see Ethyl butyrate). Butyria ether (see Ethyl butyrate). Butyriade contentanks, 1.0.0 plant.	1	Butylated hydroxytoluane, food, lead			f.o.b. works to	n 2
Butyraciderryde, tente, divid.		tech., bas., c.l., t.l., dlvd., lb.	1.24		USP, bgs., c.l., t.l., works, fri	i.
Bulyrio ether (see Ethyl bulyyste). Bulyrio ether (see Ethyl bulyste). Buly ether (see Ethyl ether). Bu	١	Butyrakienyde, tanke, divd	.291/2	.38	anhyd., USP, same basis 100 ibs	
Eddmlum chloride, purif. cryst., 100- ib. dna, Ll., works. b. Cadmlum, CP, red, dark shade, bbls. floride, same basis. b. Sight shade, bbls, same basis. b. Bight shade, bbls, same basis. b. Cadmlum-flight shade, bbls, same basis. b. Cadmlum-selenide liftopone, orange, slab, shade, bbls, same basis. b. Cadmlum-glight shade, bbls, same basis. b. Cagmlum-glight shade, bbls, same basis. b. Cadmlum-glight shade, b		Bulyric ether (see Ethyl butyrate).		_	Calcium phosphate, monobasic	
Cadmium chloride, purif. cryst., 100- B. dras., Li, works., 10. Cadmium, CP, red, dark shade, bbls., 10. Rockies. b. 11.33 18.35 Rockies. b. 10.06 Rockies. b. 10.26 Rockies. b. 10.27 Rockies. b. 10.26 Rockies. b. 10.27 Rockies. b. 10.26 Rockies. b. 10.26 Rockies. b. 10.27 Rockies. b. 10.26 Rockies. b. 10.27 Rockies. b. 10.26 Rockies. b. 10.27 Rockies. b. 10.26 Rockies. b. 10.26 Rockies. b. 10.27 Rockies. b. 10.26 Rockies. b. 10.27 Rockies. b. 10.26 Rockies. b. 10.27 Rockies. b. 10.26 Rockies. b. 10.26 Rockies. b. 10.27 Rockies. b. 10.26 Rockies. b. 10.26 Rockies. b. 10.27 Rockies. b. 10.26 Roc	1	n-Butyronitrile, dms., c.i., d/vd fb.	.93	=	monohydrate, food grade bgs., c.l., t.l., works, frt	
Cadmium chloride, purif. cryst., 100- Ib. dms., Li., works	-	wine, with ,	.04		equald 100 lbs anhyd., food grade, same ba	-
Cadmium chloride, purif. cryst., 100-lb. dms., Lt., works lb. 3.73 Cadmium, CP, red, dark shade, bbls., 100-lb. tots, 1ft. elid., E. of Rockies bb. 11.33 light shade, bbls., same basis .lb. medium shade, bbls., same basis .lb. 10.69 lis. cls., frt. elid., E. of Rockies lb. 10.26 lis. cls., frt. elid., E. of Rockies lb. 10.26 lis. cls., frt. elid., E. of Rockies lb. 10.26 lis. cls., frt. elid., E. of Rockies lb. 10.26 lis. cls., frt. elid., E. of Rockies lb. 10.26 lis. cls., frt. elid., E. of Rockies lb. 10.26 lis. cls., frt. elid., E. of Rockies lb. 10.26 lis. cls., frt. elid., E. of Rockies lb. 10.26 lis. cls., frt. elid., E. of Rockies lb. 10.26 lis. cls., frt. elid., E. of Rockies lb. 10.27 lis. cls., frt. elid., elid.					819, 100 lb8	
Cadmium chloride, purif. cryst., 100- lb, dms, Li, works lb. Cadmium, CP, red, dark shade, bbla., I 30-lb, lois, frt. sild. E. of Rockies lb. light shade, bbla., same basis lb. Cadmium-light shade, bbla., same basis lb. Cadmium fluoborate, liq. conc., dms., 1.1, works lb. Cadmium fluoborate, liq. conc., dms., 1.1, works lb. Cadmium fluoborate, liq. conc., dms., 1.1, works lb. Cadmium retail ingots or sides, lon lois, ca., divd lb. Cadmium retail ingots or sides, lon lois, ca., divd lb. Cadmium-selenide lithopone, orange, light shade, bbls., same basis lb. Cadmium-selenide lithopone, orange, light shade, bbls., same basis lb. Cadmium-selenide lithopone, red, dark shade, bbls., same basis lb. Cadmium-selenide lithopone, red, dark shade, bbls., same basis lb. Cadmium-selenide lithopone, red, dark shade, bbls., same basis lb. Cadmium-selenide lithopone, red, dark shade, bbls., same basis lb. Cadmium-selenide lithopone, red, dark shade, bbls., same basis lb. Cadmium-selenide lithopone, red, dark shade, bbls., same basis lb. Cadmium-selenide lithopone, red, dark shade, bbls., same basis lb. Cadmium-selenide lithopone, red, dark shade, bbls., same basis lb. Cadmium-selenide lithopone, red, dark shade, bbls., same basis lb. Cadmium-selenide lithopone, red, dark shade, bbls., same basis lb. Cadmium-selenide lithopone, red, dark shade, bbls., same basis lb. Cadmium-selenide lithopone, red, dark shade, bbls., same basis lb. Cadmium-selenide lithopone, red, dark shade, bbls., same basis lb. Cadmium-selenide lithopone, red, dark shade, bbls., same basis lb. Cadmium-selenide lithopone, red, dark shade, bbls., same basis lb. Cadmium-selenide lithopone, red, dark shade, bbls., same basis lb. Cadmium-selenide lithopone, red, dark shade, bbls., same basis lb. Cadmium-selenide lithopone, red, dark shade, bbls., same basis lb. Cadmium-selenide lithopone, red, dark shade, bbls., same basis					1 equald	
Cadmium chloride, purif, cryst., 100-lb, dms, Li, works lb. Cadmium, CP, red, dark shade, bble., 100-lb, iots, frt. slid., E. of Rockies lb. light shade, bble., same basis b. slib. iii. 133 16.35 medium-light shade, bble., same basis b. lb. Cadmium, CP yellow, all shades, bble., arms basis b. cadmium, CP yellow, all shades, bble., arms basis b. cadmium-mercury lithopone, maroon shade, bbls., frt. slid. E. of Rockies lb. Cadmium mercury lithopone, maroon shade, bbls., frt. slid. E. of Rockies lb. Cadmium mercury lithopone, maroon shade, bbls., same basis b. cadmium-selenide lithopone, crange, light shade, bbls., same basis b. deep shade, bbls., same basis b. cadmium-selenide lithopone, rod, dark shade, bbls., same basis b. fight shade, bbls., same basis b. medium sight shade, bbls., same basis b. fight shade, bbls., same basis b. fight shade, bbls., same basis b. cadmium-selenide lithopone, rod, dark shade, bbls., same basis b. fight shade, bbls., same basis b. fight shade, bbls., same basis b. cadmium-selenide lithopone, rod, dark shade, bbls., same basis b. fight shade, bbls., same basis b. cadmium-selenide lithopone, rod, dark shade, bbls., same basis b. fight shade, bbls., same basis b. cadmium-selenide lithopone, rod, dark shade, bbls., same basis b. fight shade, bbls., same basis b. cadmium-selenide lithopone, rod, dark shade, bbls., same basis b. fight shade, bbls., same basis b. cadmium-selenide lithopone, rod, dark shade, bbls., same basis b. fight shade, bbls., same basis b.	j	V			or more f.o.b. frt. alid ID	).
ib. dms., Ll., works. ib. Cadmium, CP, red, dark shade, bbls. is. frt. skid. E. of Rookles ib. ib. islight shade, bbls., same basis ib. medium shade, bbls., same basis ib. medium shade, bbls., same basis ib. ib. Cadmium, CP yellow, all shades, bbls. ib. ib. conc., dims., tl., works, irt. equald. ib. medium mitate, bbls., frt. skid. E. of Rockles il. conc., dims., tl., works, irt. equald. ib. medium mitate, bbls., same basis ib. cadmium mitate, bbls., frt. skid. E. of Rockles il. conc., dims., tl., works, irt. equald. ib. cadmium mitate, purff., fake 400-lb. Cadmium mitate, purff., fake 400-lb. Cadmium mitate, purff., fake 400-lb. Cadmium selenide liftopone, orange, light shade, bbls., same basis. ib. deep shade, bbls., same basis. ib. fight shade, bbls., same basis. ib. hight shade, bbls., same basis. ib. cadmium shade, bbls., same basis. ib. cadmium shade, bbls., same basis. ib. hight shade, bbls., same basis. ib. cadmium shade, bbls., same basis. ib. cadmine, USP, syn., cryst. shipt, powd., dms., ib. cadmine, USP, syn., cryst. shipt, powd., dms., ib. cadmine, USP, syn., cryst. shipt, powd., dms., ib. cadmine, USP, syn., cryst., shipt, powd., dms., ib. cadmine, USP, syn., cryst., shipt, powd., dms., ib. cadmine, USP, syn., cryst., shipt, strauding the ship strauding the shipt strauding cadmine, USP, syn., cryst., shipt, strauding the shipt strauding the s					worksib	
Cadmium CP, red, dark shade, bbls. 100-lb. tots, frt. elid. E. of Rocides b. b. same basis b. b. 11.33 16.35 medium-light shade, bbls., same basis b. 10.66 15.20 medium-light shade, bbls., same basis b. 10.26 14.50  Cadmium CP yellow, all shades, bbls., 100-lb. lots, frt. elid. E. of Rocides b. b. b. shame basis b. 10.26 14.50  Cadmium fluoborste, liq. conc., dms., t.l., works, frt. equald. b. b. 3.22  Cadmium fluoborste, liq. conc., dms., t.l., works, frt. equald. b. b. 3.22  Cadmium metal lingots or sticks, lon lots, cs., divd. b. c. divd. c. d	}		3.73	_	Calomei, NF, mild powd., 100-lb. dms.	
Rookles same basis b. 13.33 16.36 kgs. medium shade, bbis., same basisb. 10.89 15.20 medium-light shade, bbis., same basisb. 10.26 14.50 Lots or more 100-lb. lots. frt. elid E. of Rockles		Cadmium, CP, red, dark shade, bbls.,			f.o.b. works	OXA
medium shade, bbis., same basis.lb. medium shade, bbis., same basis.lb. Cadmium, CP yellow, all shades, bbis., all to lb. Cadmium floborete, liq. conc., dms., t.l., works, irt. equaldlb. medium-light shade, bbis., same basis.lb. Cadmium mercury lithopone, mercon shade, bbis., frt. alld. E. of Rockles. lb. Cadmium metal ingots or sticks, ton lots, cs., divdlb. Cadmium mitrate, purif., flake 400-lb. cinrs., cf. l.l., f. ob. ship. pt.lb. Cadmium-selenide lithopone, crange, light shade, bbis., same basis.lb. bight shade, bbis., same basis.lb. bight shade, bbis., same basis.lb. medium shade, bbis., same basis.lb. medium shade, bbis., same basis.lb. cadmium-selenide lithopone, yellow, all shades, bbis., same basis.lb. cadmium-light shade, bbis., same basis.lb. cadmium-light sh		Rookles			Camphor, monobromated, dms.	
Sign. State Schools Sc	ĺ	medium shade, bbls., same basis.ib.			Camphor, syn., tech., 165-lb. dms., 5,000 lbs. or more lb.	•
## 100-lb. lots, frt. alid., E. of Rockles.    Cadmium fluoborate, liq. conc., dms., t.l., works, irt. equald.   lb. assets besis.   lb.   cadmium-mercury lkhopone, meroon shade, bbts., frt. alid. E. of Rockles.   lb.   d.   b.   d.   candium mercury lkhopone, meroon shade, bbts., frt. alid. E. of Rockles.   lb.   d.   b.   d.   candium mertal lingots or sticks, ton lots, cs., dwd.   lb.   d.   b.   d.   candium mitrate, purif., fiske 400-lb.   d.   d.   d.   d.   d.   d.   d.		616ID.	10.26	14.50	USP, powd., 165-ib. dms., 5,000	)
Cadmium fluoborate, liq. conc., dms. t.l., works, int. equald. b. medium-light shade, bbis., same basis. b. Cadmium mereury lithopone, meroon shade, bbis., state b. Cadmium mittal ingots or sticks, ton lots, cs., divd. b. Cadmium mittals, purif., flake 400-tb. clams., c.i., t.l., f.o.b. ship. pt.lb. Cadmium-selenide lithopone, orange, light shade, bbis., same basis. b. deep shade, bbis., same basis. b. Bight shade, bbis., same basis. b. Bight shade, bbis., same basis. b. Bight shade, bbis., same basis. b. Cadmium-selenide lithopone, red, dark shade, bbis., same basis. b. Cadmium-selenide lithopone, red, dark shade, bbis., same basis. b. Cadmium-selenide lithopone, systow, all shades, bbis., same basis. b. Cadmium-selenide lithopone, yellow, all shades, bbis., same basis. b. Cadmium-selenide lithopone, yellow, all shades, bbis., same basis. b. Cadmium-selenide lithopone, yellow, all shades, bbis., same basis. b. Cadmium-selenide lithopone, yellow, all shades, bbis., same basis. b. Cadmium-selenide lithopone, yellow, all shades, bbis., same basis. b. Cadmium-selenide lithopone, yellow, all shades, bbis., same basis. b. Cadmium-selenide lithopone, yellow, all shades, bbis., same basis. b. Cadmium-selenide lithopone, yellow, all shades, bbis., same basis. b. Cadmium-selenide lithopone, yellow, all shades, bbis., same basis. b. Cadmium-selenide lithopone, yellow, all shades, bbis., same basis. b. Cadmium-selenide lithopone, yellow, all shades, bbis., same basis. b. Cadmium-selenide lithopone, yellow, all shades, bbis., same basis. b. Caffeine, dom. USP, syn. cryst. shades, bbis., same basis. b. Caffeine, dom., USP, syn. cryst. shades, bbis., same basis. b. Caffeine, dom., USP, syn. cryst. shades, bbis., same basis. b. Caffeine, dom., USP, syn. cryst. shades, bbis., same basis. b. Caffeine, dom., USP, syn. cryst. shades, bbis., same basis. b. Caffeine, dom., USP, syn. cryst. shades, bbis., same basis. b. Caffeine, dom., USP, syn. cryst. shades, bbis., same basis. b. Caffeine, dom., USP, syn. cryst. shades, bbis., sam	1	100-lb. lots, frt. alid., E. of	A 10	7 07	ayn., refd., 1-oz. tablets, ctns. 1,000-	•
medium-light shade, bbis., same basis. b. Cadmium reroury lithopone, meroon shade, bbis., frt. alkl. E. of Rocktes. b. Cadmium retail ingots or sticks, ton lots, cs., divd. b. c. divd. c. d		Rockles		7.07	Camphor oil, yellow, 25-lb, drns lb.	
Cadmium-mercury lithopone, mercon shade, bbts., frt. alid. E. of Rocktes. b. Cadmium metal ingots or sticks, ton lots, cs., divd. b. 1.20 1.50 Cadmium nitrate, purif., flake 400-b. dms., c.i., t.i., f.o.b. ship. pt.lb. Cadmium-selenide lithopone, orange, light shade, bbts., same basis. b. Cadmium-selenide lithopone, red, dark shade, bbts., same basis. b. Both shade, bbts., same basis. b. Cadmium-selenide lithopone, red, dark sis. b. Cadmium-selenide lithopone, red, dark shade, bbts., same basis. b. Cadmium-selenide lithopone, red, dark sis. b. Cadmium-selenide lithopone, velow, all shades, bbts., same basis. b. Cadmium-selenide lithopone, yelow, all shades, bbts., same basis. b. Cadmium-selenide lithopone, yelow, all shades, bbts., same basis. b. Cadmium-selenide lithopone, yelow, all shades, bbts., same basis. b. Cadmium-selenide lithopone, yelow, all shades, bbts., same basis. b. Cadmium-selenide lithopone, yelow, all shades, bbts., same basis. b. Cadmium-selenide lithopone, yelow, all shades, bbts., same basis. b. Cadmium-selenide lithopone, yelow, all shades, bbts., same basis. b. Cadmium-selenide lithopone, yelow, all shades, bbts., same basis. b. Cadmium-selenide lithopone, yelow, all shades, bbts., same basis. b. Cadmium-selenide lithopone, yelow, all shades, bbts., same basis. b. Cadmium-selenide lithopone, yelow, all shades, bbts., same basis. b. Cadmium-selenide lithopone, yelow, all shades, bbts., same basis. b. Cadmium-selenide lithopone, yelow, all shades, bbts., same basis. b. Cadmium-selenide lithopone, yelow, all shades, bbts., same basis. b. Cadmium-selenide lithopone, yelow, all shades, bbts., same basis. b. Cadmium-selenide lithopone, yelow, all shades, bbts., same basis. b. Cadmium-selenide lithopone, yelow, all shades, bbts., same basis. b. Cadmium-selenide lithopone, yelow, all shades, bbts., same basis. b. Cadmium-selenide lithopone, yelow, all shades, bbts., same basis. b. Cadmium-seleni	ļ	medium-light shade, bbls., same ba-		-	{ spec, grev., 1.070, dms,	
ehade, bbls., frt. alid. E. of Rockles. b. L. of Rockles. b. D. of Rockles. b. L. of Rockles. b. L. of Rockles. b. L. of Rockles. b. D. of		giglb. Cadmium-mercury lithocona, marcon	3.22	-	Candeliffa wax, crude, bgs	
Cadmium metal ingots or sticks, ion lots, cs., divd b. 1.20 1.50 Cadmium nitrate, purit., fisite 400-b. dms., c.i., t.i., f.o.b. ship. ptib. 2.10 Cadmium selenide litriopone, orange, light shade, bbts., same basis b. deep ahade, bbts., same basis b. 5.27 5.30 light shade, bbts., same basis b. 5.27 5.30 medium light shade, bbts., same basis b. 5.27 5.30 medium shade, bbts., same basis b. 5.27 5.76 medium shade, bbts., same basis b. 5.27 5.76 medium shade, bbts., same basis b. 5.27 5.76 medium shade, bbts., same basis b. 5.72 5.76 medium shade, bbts., same basis b. 5.72 5.76 medium shade, bbts., same basis b. 5.72 5.76 cadmium-selenide litriopone, yellow, all shades, bbts., same basis b. Cadmium-selenide litriopone, yellow, all shades, bbts., same basis b. Cadmium-selenide litriopone, yellow, all shades, bbts., same basis b. Cadmium-selenide litriopone, yellow, all shades, bbts., same basis b. Cadmium-selenide litriopone, yellow, all shades, bbts., same basis b. cadmium-selenide litriopone, yellow, all shades, bbts., same basis b. Cadmium-selenide litriopone, yellow, all shades, bbts., same basis b. Cadmium-selenide litriopone, yellow, all shades, bbts., same basis b. Cadmium-selenide litriopone, yellow, all shades, bbts., same basis b. Cadmium-selenide litriopone, yellow, all shades, bbts., same basis b. Cadmium-selenide litriopone, yellow, all shades, bbts., same basis b. Cadmium-selenide litriopone, yellow, all shades, bbts., same basis b. Cadmium-selenide litriopone, yellow, all shades, bbts., same basis b. Cadmium-selenide litriopone, yellow, all shades, bbts., same basis b. Cadmium-selenide litriopone, yellow, all shades, bbts., same basis b. Cadmium-selenide litriopone, yellow, all shades, bbts., same basis b. Cadmium-selenide litriopone, yellow, all shades, bbts., same basis b. Cadmium-selenide litriopone, yellow, all shades, bbts., same basis b. Cadmium-selenide litriopone, yellow, all shades, bbts., same basis b. C		shade, bbis., frt. alki. E. of	4.60	_	refd. pure, bgs	
drie., c.i., i.i., i.o.b. ship. pib. 2.10  Cadmium-selenide limpopone, orange, light shade, bbis., same basis. ib. deep s		Cadmium metal ingota or sticks, ton		1.50	tanks	
Cadmium-selenide-lithopone, orange, light shade, bbis., same basis		Cadmium nitrate, purif., flake 400-10.		-	i Cancolectam monomer, flake, bûs., t.i.,	
deep shade, bbls., same basis. ib. Cadmium-selenide litriopone, red, dark shade, bbls., same basis. ib. Bight shade, bbls., same basis. ib. Inght shade, bbls., same basis. ib	}	Cedmican-selenide-litropone, orange,	-110		to be shipping point	
Cadmium-selenida litriopone, red, dark shade, bbis., same basis. b. 5.27 5.30 medium light shade, bbis., same basis. b. 5.27 5.76 medium light shade, bbis., same basis. b. 5.72 5.76 medium shade, bbis., same basis. b. 5.72 5.76 medium shade, bbis., same basis. b. 5.72 5.76 medium shade, bbis., same basis. b. 6.37 6.40 maroon shade, bbis., same basis. b. 7.47 cadmium-selenida litriopone, yellow, all shades, bbis., same basis. b. 2.97 3.00 cadmium sulfata, 50-lb. dms., any quantity, 1.o.b. ship. pt. b. b. Caffeine, dom. USP, syn. cryst. sninyd., powd., dms. b. 1.00,000 bs, or more. b. 1.50 1.70 calamine, USP, syn. cryst., sninyd., powd., dms. b. 1.50 1.70 calamine, USP, dms. b. 28,80 35.00 calamine, USP, dms. b. 28,80 35.00 calamine, use Ergopalciferol, calamine, use Ergopalciferol, calamine, use Ergopalciferol, dms. b. 28,80 35.00 calamine, use Ergopalciferol, dms. b. 28,80 35.00 calamine, use Ergopalciferol, calamine, use	I	(代, elid, E. of Flockles,			Coprol slookel sec. 92-99% tenks.	
shade, bbis., same basis. 10. 5.27 Bight shade, bbis., same basis. 10. 5.72 Bight shade, bbis., same basis. 10. 5.74 Bight shade, bbis., same basis. 10. 5.74 Bight shade, bbis., same basis. 10. 5.72 Bight shade, bbis., same basis. 10. 5.74 Bight shade, bbis., same basis. 10. 5.74 Bight shade, bbis., same basis. 10. 5.72 Bight shade, bbis., same basis. 10. 5.74 Bight shade, bbis., same basis. 10. 5.72 Bi		Cadmium-selenkie lithopone, red, dark			Capryllo acid, comi. pure tenks	
medium shade, bbis., same basis. b. 5.72 5.76 medium shade, bbis., same basis. b. 6.37 6.40 maroon shade, bbis., same basis. b. 7.47 Cadmium-selende tithopone, yellow, sill shades, bbis., same basis. b. 2.97 3.00 Cadmium sultate, 50-lb. dma., any quantity, 1.o.b. ship. pt . b. b. 6. Caffeine, dom., USP, syn. cryst. sninyd., powd., dms., cl., 1.1, sild. b. 5.80 imp., cryst., sninyd., powd., dms., 1.0,000 bs, or more. b. 1.50 1.70 Catamine, USP, dms. b. 28,80 35,00 Catamine, dms. dms. dms. dms. dms. dms. dms. dms.		shade, bla., same basis ID.		5.30	Capsicum (see Pepper, red). Capsicum of (see Capsicum decresin)	
medium shade, bbis., same basis. D. 7.47 Cadmium-selenide ithopons, yellow, all shades, bbis., same basis. b. 2.97 Cadmium-selenide ithopons, yellow, all shades, bbis., same basis. b. 2.97 Cadmium sultate, 50-lb. dms. sh. c. b. c.		medium light shada, bols., same ba-			Capalcum cleoresin, NF, from dom., pepper, oms	
Cadmium-selende timoporis, yesow, su shades, bbis., same basis. b. 2.97 3.00 Caraway oil, Poland, dros		medium ahada, bbis., same basis.ib.		6.40	NF, from African pepper, drife. 500,000 pungency	٠.
Cadmium sultate, surto, orner, any quantity, t.o.b. ship. pt. b. b. 4.05  Caffeine, dom., USP, syn. cryst. sn-hyd., powd., 100-b. dms., cl. t., frt. sld. b. 5.80  imp., cryst., snhyd., powd., dms., 1.50  imp., cryst., snhyd., powd., dms., b. 1.50  Catemns, USP, dms. b. 1.50  Catemns, USP, dms. b. 28,80  Catemns oil, dms, cl. t., works. b. 28,80  Catemns oil, dms, cl. t., works. b. 28,80  Catemns oil, dms, cl. t., works. b. b. 28,80  Catemns oil, dms, cl. t., works. b. t., t., t., t., t., t., t., t., t., t.		Cadmium-sejenide lijnopone, yelow, au chades, bbls., same basis, . ib.	2.97	3.00	I I OOO OOO DUURAANN	. '
Caffeine, dom. USP, syn. cryst. sn- hyd., powd., 100-3b. dris., cl. tl., fri. slid. b. 5.80 imp., cryst., srhiyd., powd., dms. 10,000 bs, or more. b. 1.50 Cstamine, USP, dms. b. 28,80 Cstamine, useries. b. 1,50 Cstamine, userie		Cadmium suitate, 50-lb. dme., eny		_	Careway seed, Dulch, Dog	
imp., cryst., snhyd., powd., dms., 10,000 bs, or more. b. 5.80 1.70 general purpose (GPF), bulk, o.l works.  Calamine LISP, dms. b. 26,80 65.00 bgs, o.l. works. b. Calamus oil, dms, c. see Ergosalciferoi), case Ergosalciferoi, case Ergosalciferoi, dms. c. see Ergosalciferoi, dms. see		Caffeine, dom., USP, syn. cryst. sn-	1.36	1	Carbon black, furnace, fast extrucing.	
d 10,000 bs, or more	-	1.1 111. 200	-	•	boac.l. Works	
Calamine USP, dris.  Calamine oil, works.  Duk, ci. works.  Li. works.  Das. ci. works.  Li. works.	a	10,000 bs, or moreb.		1.70	). MANAMI NITODIA IGENI, DUK. V	l
Calcium Scetate, purifi, powd., one, bgs., ct., works.		Calamna, USP, oma	28.80		1 high adrasion (HAF), nigh structure,	
November 17, 19			47		buk, a.i. worksb.	
The state of the s	. (	CT MOUNT		- 1 h	November 17, 198	_
	•	THE STATE SAFER	J. 18 1.	10 To 1/4	7.7	و الم

Calaban analysis and			استوب ويبرسن بسياب والتناز	يسندار جسندانا
Calcium carbide, std., generator size, bulk, c.l., f.o.b., works, ton	402.00	_		
Calcium carbonate, pulverized, 325-	102.00	_	CHEMIC	7 4 1
mash, bgs., bulk, (.o.b. workston	46.00			_ #\ B
BIUMBB, 54% SOICS, BROVA	40.00	-		
DBSIS	97.00	100.00		
72% solids, same basis ton quicklime, gran., ind., bulk, work-	109.27	-	PRICES	À
8 ton	100.93	_	II DRII : H C	7.
CHICKLIN CHICGUSTS, COSTSC, PAS., C.L.				}
worksib. Calcium carbonate, pracip., bgs.,	.0830	.1600	<u>-</u>	,
Cl., i.l	385.00	445.00	WEEK ENDING NOV 14,	1006
Calcium carbonate precip, medium.			TIELIT ENDING NOV 14,	1800
bgs.,c.l., works ton precip. dense. bgs., c.l., surface	110.00	150.00	Carbon Black, low structure, bulk, c.i.	
Teated, bgs., c.l., works ton	265.00	_	worksb.	.240
ultrafine, USP, bgs.,	047.00	000 00	bags, c.l. works	.270
c.l.,workston Calciumchloride, conc., reg. grade. 77-	217.00	225.00	(ISAF)lb.	.25
80%, flake, bulk, c.i.,			bgs.,c.l. works	.28
works ton	153.00	-	) works	.31
100-tb. bgs., c.i., same basiston	196.00		l bas. c.l., works	4050
anhyd., 94-97%, flake or pellet, bulk,	190.00	-	semi-reinforcing (SRF), bulk, c.i., works	.210
c.i., same basis ton	217.00	-	bgs., c.l., works	.240
80-lb. bgs., c.l., same basis ton brining grade, 80-lb. bags ton	279.00 285.00	-	Carbon black, thermal, medium, bgs.	.30
Calcium chloride, liq., 100 percent ba-	200.00	-	bulk.o.j. worksb.	.32
sis, i.c., t.t., barge ton	99.75	-	Carbon black oil, barge, f.o.b. Gulf re-	
45% same basteton Calcium chloride, USP, gran., 225-lb.	118.00	-	finariesbbla.	10.50 12 10.50 12
dma., t.l., frt. equald  b.	.90	_	Carbon disulfide, t.o., f.o.b. works ton	420.00
Calcium citrate, purif., 200-lb. dms.,			Carbon tetrachloride, CP, consumers, dms., c.l., frt. alid ib.	26
10,000 lbs. ar mars, f.a.b. workslb.	3 00		tech., dms., c.l., t.l., frt. alid ib.	.36 .31
Calcium cyanamide, indust., anhyd.	3.82	-	tank transport (min. 4,000 gals.)	
dms., works	400.00	450.00	frt. alidib. Carboxymathyl cellulose (see CMC).	.24
Calcium gluconate, USP powd. t.l lb. Calcium hydride, lump, dms., 25-	1.80	-	Cardamom of NF, bots	60-00
1,000-lb. lots. workslb.	10.50	13.25	Gardamoms, decort, Guatemalan lb. green, Guatemalan bgs lb.	2.90 5.75 7
Calcium hypochlorite, 100-lb. dms.,			Carmine, No. 40, NF, bulk, 100-lb. lots	5.75
truckloads ship,t. E, of Rock- les 100 lbs.	92.40		or more, divdib.	135.00 140
Calcium hypophosphite, dms., bulk,	84.40	-	Camauba wax, Pamahyba, No. 1, yel- low, bgs., ton lots	1.95 2
500 kilos or more kilo	13.75	14.50	Ceara, No. 1, yellow, bgs., ton	
Calcium lodate, FCC dms., f.o.b.	5 50		North Country, No. 2, refined, bgs.,	1.75
worksib. Calcium lodide, 50-kilo dms., f.o.b.	5.50	-	ton lotslb.	1.85
worksklio	23.65	25.65	Camauba wax, North Country No. 3,	
Calcium lactate, NF, powd., pentahy-			centifuged bgs., ton lots. Ib North Country, No. 3, refined, bgs.	1.10
drate, dms., 24,000 lbs. or more, f.o.b. works	2.00	_	ton lotsib.	1.30
NF, gran., trihydrate, same basis, ib	2.10	-	Powdered camauba wax, 20 to 100 mesh, 20c. per fb. higher.	
special gran., dried grade, same ba- sis	2.80		b-Carotana, in vegetable oil, semi-solid	
Calcium naphthenate, Iq., 4% Ca., c.i.,	2.00	-	suspension, 400,000 A units	20.75
f.o.b. plant, E. of Rockles lb	.85	-	per gram., 33 lbs. or moreib. b-Carotena, liq. in vagetable oil.	32.75
d-Calcium pantothenate, USP, 100- 500-kilo lotskilo		_	1 500.000 A units per gram 33	** **
di-Calcium pantothenate, feed grade,		_	lbs. or more	40.75
f.o.b. frt. alid., 250 kilos or	0.00		A units per gram 50-lb, cns lb.	26.85
more		8.50	d-Carvone, 25-lb, dma., synlb. I-Carvonelb.	48.00 7.00
ride complex, feed grade, 160	)		Cascara sagrada bark, bulk ib.	1.00
grams per (b., f.o.b., frt. alid.,	0.75		Casain, imp., acid-precip., grd., 30-	
500 lbs or moreib. Calcium phosphate, dibasic, feed		-	mesh, Australian, edibis, same basis, c.l.fib.	1.45
grade, 181/2% P. bulk, c.l., t.l.,			Australian, indust., same basis.	
f.o.b. works ton	228.00	-	Cassella acid, 303 mol. wt., dms., frt.	1.365
Calcium phosphate, dibasic, dihydrate, USP, bgs., c.l., t.l., works, frt,			alid., 100% basis	3.70
equald 100 lbs.	62.60	-	Cassia, Korintii "A" bos b.	1.08
anhyd., USP, same basis 100 lbs. dentifice grade, same basis60 lbs.	71.75 49.90	-	"B" bgs	.95 18.50
Calcium phosphate, monobasic,		-	Castor oil, raw, No. 1, Braz. tanks ib.	.31
monohydrate, fond grade,			usp 5-9 dmsib.	.74 .78
bgs., c.l., t.l., works, frt. squakl 100 lbs.	50.60	_	blown, 5-9 dms	.75
anhyd., food grade, same ba-			dehydrated, bodled, tanka lb. dehydrated, unbodled, tanka lb.	.74 .65
als,	54.95	-	Castor oil, acida dehydrated, dms ib.	1.10
equald 100 lbs.	62.50	-	richoleic acidib.	.791/2
Calcium propionate, dms., 2,000 lbs.			Castor pomace, bgs., container load, 1.o.b., Miami, Flaton	154.00
or more f.o.b. frt. alid lb. Calcium alicate, hydrated, bgs., c.i.,	.50	.55	Castoreum, nat., cns b.	18.00 3
worksib.	.07	-	syn. cns	11.00
Calcium sliicate, paint grade įsas Wolla Calomei, NF, mild powd., 100-lb. dms.,	storite).		( dms., f.o.b.,	7.93
to b. worksb.	8.50	-	tech., bgs., t.l., same basis kilo. Caustic potash (see Potash, caustic).	3.71
Camphene chlorinated, 67-69% (see To	oxaphene).		Caustic soda (see Soda, caustic).	47.55
Camphor, monobromated, dms., kgsb.	3.63	3.70	Cedarear oil, dmsib. Cedarwood oil, Texas, dms., cnsib.	17.50 1.75
Camphor, syn., tech., 165-lb. dmg.,			Virginiab.	4.75
5,000 fbs. or more fb. USP, powd., 165-fb. dms., 5,000	1,80	-	Cedrol prime dms	6.25 4.25
lb. lots or more lb.	2.38	-	Celery seed, Indian, bgsb.	.46
ayn., refd., 1-oz. tablets, cins. 1,000-	3.50	_	Celturose acetate, powd., bgs., t.i.,	37.00
ib, lots or more ib. Camphor oil, yellow, 25-ib. das ib.	1.65	-	divd. E	1.30
white, dms	2.00	-	Cellulose acetate butyrate, powd.,	
spec. grav., 1.070, dms b. Cananga oli, Indonesian, dms klio	2.65 17.50	2.85	17% butryl content, bgs., t.J., divd, E	1.75
Candelila wax, crude, bgs	1.90	-	38% butryl content, bge., divd. E fb.	1.59
refd. pure, bgs	2.10 .60	.65	50% butryl content, bgs., dlvd. E lb. 55% butryl content, bgs., dlvd. E lb.	1.81 1.83
Caprio acid, comi, pure, dins ib. tanks	.60	.85	Cellulose gum, pure, high vis., bgs., 24,000-lb. lots or more works,	
Capric aldehyde (aldehyde C-10) dms., cns	0.04	E 0E	f.o.b. Hopewell, Va ib.	1.60
Caprolactam monomer, flake, bgs., t.f.,	3.96	5.85	l std., low or medium vis., bas., c.l.,	
f.o.b. shipping point lb.	.87	-	t.l., f.o.b. Hopewell, Va lb. Cerium concentrate CeO <sub>2</sub> , 50 lbs lb.	1.60 1.35
molten, tanks, same basis ib. Capryl alcohol sec. 92-99% tanks,	.86	-	Ceumu ukaioxkos Anas CeO# aluie"	
f.o.b. works	.95		77% CeO <sub>2</sub> , dma., workslb.	5.40 4.20
Capryllo acid, comil. pure tanks ib.	.73%	· -	Cerlum oxide, optical grade, bgs., 50-	•
Capalcum (see Papper, red). Capalcum of (see Capalcum cleoresin).	•		fb. lots or more, divd lb.	1.85
Canaloum oleoresin, NF, 110m dom.			Catyl alcohol, NF, cns., cl., 1J., divd. E. lb. Chalk (see Calchim carbonale).	887≥
pepper, dms	11.00	: <del>-</del>	Chamomile flowers, Hungarian, cs ib.	4.25
500.000 pungency10	9.00		Roman, cs	4.94 2.70
1,000,000 pungency <u>I</u> D.	17.00 22.00	18.00 25.00	Chamomile oil, blue, Egyptian lb.	545.00
Caraway oil, Poland, dms	22.00 58	. 69	blue, Hungarian	370.90 15.00
Fovolisa bas	50	.53	Chicago acid, dry, bbis., iri. and to.	13.60
Carbon black, furnace, fast extruding. (FEF), bulk, c.i., works ib.	2126	· · ·	Chiles (see Pepper, red). Chiorandio anhydride, tech., dms., t.l.,	
holaa.l. WOKKB	242		WORKS.	1.30
neneral purpose (GPF), bulk, C.I.,	.2076		Chlorinated paralifit, 40% chlorine, bulk, divd., Zone 1	.∡≅
bgs. o.l. works	: .2378		50% chlorine, same basis lb.	46
high abrasion (HAF), high structure,	• : · · · · ·	S. 1 .	80% chiorine, same paste ilo.	4874
buk, a.t. worksb.	2300 2600		70% chlorine, resinous, 50-lb.	<b></b>
			·	
November 17, 1986	1.4 %	CHEM	ical marketing report	Proces
	المناوحة المناث		A Secretary of the second seco	المراكب المحالية والما

6.30 \_

4.50 3.00

			CMC, technical, 98% minimum, low or		
CHEMIC	7 A		mediumvis., bgs., 24,000 lbs., f.o.b. Hopawali, Vs., 100% basis	1,25	_
CHEMIL	s Li		detergent makers, f.o.b. manufac- turing point	.64	_
			CMC, purif., high via., (see Cellulose gun Coalter pitch, indust., liq., works .ton.		255.00
PRICES			roofing, 140-155, Federal specifica-	EQU.00	200.00
PNIVES			tion RP-381 Type 1, bulk workston Cobait acetate, drus., t.l., frt. alidb.	350.00 3.61	- 4.25
			Cobalt carbonate, powd., dma., frt.	6.61	8.16
WEEK ENDING NOV 14,	1986		elid	4.15	_
Chlorinated paraffin, Zone 2 prices are Zone 3 prices are 2c per jp, high			more, ft. equald	6.20	10,55
are 5c per ib. higher Chlorinated rubber, 5, 10, 20 cps., bgs.	igi wa (.i. (	a mil humana	dms., f.o.b. NY, Chicago ib. Cobalt naphthenate, Ilq., 6% Co.,	11.70	-
t.l., alvd	1.66 1.82	_	arris., avd	2.08 2.74	3.45
126 cps., bgs., t.l., dwdlb. 300 cps., bgs., t.l., dwdlb.	2.80 2.75	<u>-</u>	Cobalt nitrate, dms., t.l., frt. alidb. Cobalt oxide, imp., black, 72-73%	9.51	
Chloring, tanks single units works, i.o.b., frt. equald, ton	195.00	200.00	Cobalt oxide, imp., 70-71 % Co ib. Cobalt phosphate powd. 32.1% Co.,	9.78	-
Chloroscetic acid, mone, high purity, tiaks, 99% butk t.o.b.			dris., dvdb. Cobalt resinate fused, 3% Co.,	1.35	-
works	.56	-	dins	.38%	-
dms., c.l., t.l., f.o.b. works . b. o-Chloroaniine, fquid, dms., c.l., f.o.b.	1.88	-	or more, (rl. ald. E lb. monohydrate, dms., (rt. ald lb.	2.81 4.56	3,54 6.02
workslb. tanks, same basisb.	1.63 1.65	Ξ	Cobelt tallate, 6% Co., dma., dlvd lb. Codilana berk, bls lb.	2.16 .40	.45
p-Chloroaniline, solid, c.l., t.l., f.o.b. b. flake, drns., c.l., same basisb.	1.70 2.00	-	Cocoa butter, spot	2.14	-
o-Chlorobenzaldehyde, dms., t.l., works,b.	2.45	-	Coconut oil scids, distilled, i.c.,	.52	.58
p-Chlorobenzakiehyde, dms., 2,000 bs. or more, worksb. o-Chlorobenzok acid, dms. i.t.l. wks 1b.	3.84 3.90	3.85	double distilled, same basis lb. Cod oil, f.o.b., Gloucester, Mass.,	.54	.63
p-Chlorobenzoic scid, dms., 500-lb. lois or more, worksb.	1.69	2.25	bulkgat.	6.50 900.00	-
Chloroform, tech. tanks, distr. divd lb. tech., consumers, tanks, divd lb.	.34%	-	Codelne phosphate, USP, cns., 25-kilo	640.00	_
NF tanks, min., consumor, 4,000 gals divd	.351/2	_	Codeine sulfate, NF cns., 25-kilo	775.00	-
2-Chioro-4-nitroanfine, paste, com- modity basia, dms., 1.1.,			Codiver oil, NF, dma gal. Copalba balsam, dma	6.50 1.50	7.25
f.o.b	3.06 3.15	-	Copaibe of, cns., dms	3.75	-
4-Chiloro-2-nitroanline, paste, 172.5 mol. wt., commodity basis,			tech., dris., t.l., works tb. Copper bromide, (cupric) 200-lb. dris.,	.71	.74
dms., t.l., f.o.b	2.25 2.70	-	100,000-lbsper-year con- trects works	1.34	_
e-Chlorophanol, dma., c.l., frt.	2.00	2.40	Copper carbonate, 55% Cu, dark, dense, 50-lb. bgs., c.i., t.i.,		
p-Chiorophanol, dms., c.i., frt. equald(b.	1.25	1.70	works	108.30	-
Chloropiczin, coml., 1,500-lb, cyls., I.I., 1.o.b. works	1.25	-	works	109.30	-
Chlorosulfonic acid, tanks, irt.	.181	-	workslb. Copper cyanide, tech. dms., 24,000-	.90	-
p-Chiorotoluene, tech., tanks, worksb. Cholecaldierol, dry, 40,000,000 units	1.00	-	Copper fluoborate, (cupric), liq. conc.,	2.30	2.62
per gram, kilo lotagm. Choîne bitartrate, cryst , 98% min., 50	24.00	-	dms., t.l., works, frt. equaldb.	.82	_
kilo dms., f.o.b. Springfield, Mo.,kilo.	6.90	_	Copper gluconate, FCC grade, 25-lb.	6.50	_
Choline chieride, feed grade, 70% aqueous, t.c., t.t., dvd. E of	0.00	_	Copper metal electrolytic wire bars, divd., domestic, basisib.	.621/2	-
Rockies	.28 .39	- '	Copper naphihenate, ilq., 8% Cu., dms., fri. aldib.	1.19	-
Choine chloride, 60%dry supplement, bulk hopper care	.38	_ [	Copper nitrate (cupric), purif., flake, dms., t.l., works lb.	.4314	-
bgs., 50,000 ibs. min	.40	-	Copper cleate, sold, 8% Cu. dms., works frtalidib.	.97	-
xilo, lots, f.o.b. Springfield,	5.00	_	Copper oxide, black (cupric), dma., 80,000-lb.lots, worksb, red (cuprous), dma., 97%, USN Type	1.21	-
Choline dilhydrogen citrate, 98% mm., 50 kilo lots, I.o.b. Springfield,			1, (AA), 80,000-lb. lote, worksb.	1.19	1.20
Ma	6.00	-	red, 90%, Type 2, same basis b. Copper-8-quinolinolate, 10%, ilq.	1.15	-
divd. E. of Rockles b. light, bgs., same basis. b. medium, bgs., same basis. b.	1.68 1.70	Ξ	emulaton, t.l., divd	2.52	-
extra deep, CP., same basis	1.72 1.74	=	99% bgs., o.l., f.o.b. works 100 bs.	48.45	_
Rockies	.63	.89.	CP. pentahydrate, cryst., dms., l.c.t.,	60.00	_
Chromic acid, 994%, flake dms., c.l.,	1.09	1.18	mononyarated, 35% Cu, arms., o.t., works 100 bs.	75.10	_
ord, same basis	1.18 1.25	=	basic, bgs., c.l., works 100 bs. Consider oil, USP, drns b.	88.30 32.00	34.00
Chromium aceate, soln., 711%, dms., 500-2,000-b.lots, works. lb.	.10	-	Rumanian	.36 .38	.37
Chromium fluoride, dms., t.l., works	.81	-	Comoil (See Oils, Fate & Waxes market Comoil, crude, foots (soapstock), 95%		
10% metal soin., 500-lb. dims. same	1.45 .74	.86	eckl; New York	.131/ .60	-
Chromium oxide, hydrated, 50-lb. bgs.ctlb.	5.50	.00	tanksb. Corn syrup 43 Bs., tanks, f.o.b.	.32	.40
pura, bgs., c.l	1.90 1.85	2.00 2.45	works 100 bs. Cortisone acetate, USP, dms., 5 kilos	11.22	11.43
Cinnamic Sicohol, 25-lb. cns lb. Cinnamon, H2	4.60 .95	1.00	or more gram. Cottonseed meel (See Oils, Fats & Wax Cottonseed of (See Oils, Fats & Waxee	.80 188 marker 188 marker	report.)
Cinnamon leaf oil, das	105.00 2.75	110.00	Cottonseed oil, acidulated (soap stock), acid, 95%, tanks,	UNAT KET LE	port.)
syn., 55-cel, dras. f.o.h.	5,50 3,18	6.65		.13	_
Citric scid. USP, hydrous, gran., 250-b. dms., U., b.	1.19	-	Cottonseed oil acids, dist., dins b. tanks b. Counterin, NF X, cryst., over 600-lo.	.63 .55	=
Citric acid, USP, arhyd., gran. 250-lb. dms., Ll., del	.85	-	iotsb. Cream of tarter (see Polassium bitartra)	6.00	6.20
Citroneda oil, Ceylon, dms	2.15 2.60	2.20	f.o.b. works	1.15	1.18
Citronelisi. 25-ib cans	2.60 2.60 3.85	- 7.40	D-Cresidina, fused, drns, works, the	1.134 4.31	
Citroneitol drums, i.o.b b. Citroneityl acetata, dms b.	3.68 5.60	6.50	lanks, same basis	1.71 1.85	=
Citronelly) formate, 25-lb. cnsb. Civet, artit., botsb.	8.85 20.00	-	m.p-Cresol, 99%, dms., t.l., f.o.b lb., bulk, same basis	.94 .82	=
Clay ball, down air floated, bgs., cl.,	400.00	-	bulk, same basis	.87 .75	=
dom., crushed, moisture-repel-	49.00	-	98% pure, oms., (J., (.o.bb.	.87	-
lent, bulk, c.l., Tenn ton Clay China (see Kaotn). Cleaners, raphtha, 140° flash tanks.	24.00	-	p-Cresol, 98%, dms., t.l., f.o.b. , b.	1.22	1.18
New Jersey or New York,	1.40	_	Content above 25%, resident		****
Clove leaf oil Indonesian, reg. dms. kilo Medegascar, reg	3.15	:	tricresyl phosphate grades, tanks, irt. slid	50	-
Clove bud oilkio	25.00 2.30	26.00	26% or less, tanks, fri. alid. b. Crotonic acid, 200-b. dms., t.i., f.o.b.	En	_
Zanzihar th	9 30		I WILL THE THE PARTY CAN INCIDE		

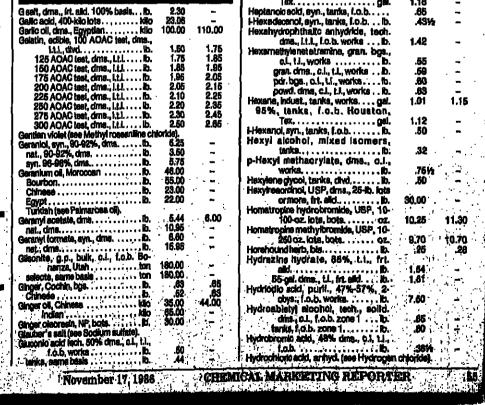
ibe rool, powd., 5% rotenone, basis,		1	Diethyl barbituric acid (see Barbital).		
50-lb. bgs., t.l., works lb. imene, bulk, contract, f.o.b lb.	.60 .14	.14	i.o.b.works	4.40	
ımin seed, indları, bgs	.95	- [	dvd	1.40	•
equald	1.16	1.37	Diethyl ethanolamina tech Rc costs I	1.18 1.10	:
hyde content, dime ID.	4.85 7.35	- 9.20	works		
96.5%, dms	7.85	-	Diethyl phthalate, lanks, f.o.b lb. odorless cosmetic grades, t.l.,	1.80 .69	
clohexane, bulk, barges, wks gal. clohexanol tech., tanks, i.o.b b.	.9825 .52	.9925 .66%	worksb. Diethyl sulfate, tanks., int. alid. Eb.	.971/2	
ciohexanone tech., tenks, f.o.b. worksib.	.5514	.581/2	Diethyl thiourea, dms., c.i., Li., works.	.59	-
tanka, divd	.565	- 1	DI-2-ethylhexyl adipate (see Dioctyl adipat Diethyl toluamide. 95-97% min. meta	2.48 8).	•
worksb.	.85		ISOMOT. dmg., t.l., fab		
			works	2.76	-
			dris., c.l., f.o.b. b.	3.18 3.10	:
			Diethylamine, dms., c.l., divd., b. tarks, same basis. b.	1.15 1.02	-
		Î	N,N-Diethylaniline, dms., c.i., t.i., t.o.b. works.	1.83	_
I-D acid, tech., 60-lb. bgs., c.l., t.l.,			tanks same basis ib. Diethylbenzens, tanks, f.o.b. works ib.	1.75	
works, frt. equald fb. I-D butyl eater, tech., 55-gal. dms.,	1.10	1.25	DI-2-ethylnexyl azelate (see Dioctyl azelat DI-2-ethylnexyl phthalate (see Dioctyl phth Diathylene glycol, tanks, divd. E b.	e). Militar	
c.i., t.i., works, frt, squakt  b. tanks, same basis	1.30 1.25	- 1	Diethylene glycol, tanks, divd. Eb. Diethylene glycol monobutyt ether,	.291/2	1
4-D dimethylamine sait, t.c., t.t.		_	dms., c.l., frt. akd. E b. tanks, frt. alld. E b.	.85 .57	
works, frt, elid gal. ocyt alcohol, mixed isomera, tariks.	8.05	-	Diethylene glycol monoethyl ether, dma., c.l., int. alid. E ib,		•
divdb. perfume grade, dmeb.	.32 .76	-	tanks, frt. alld. E	.64 .56	:
fluorinated phosphate (tricalcium), feed grade, 18% P. c.L. bulk,			Diethylene glycol monomethyl ether, dms., c.l., frt. aid b.	.62	
f.o.b. works ton	195.00	228.00	tanks, int. alid b. Diethylene glycol monobutyl ether ac-	.54	•
natured alcohol, ethyt, CO18, CD19, tanks, divd. E	1.87		etate, dms., c.l., divd. E b. tarks, dvd. E b.	.80 .72	
OTE: Tankcar sales require written au and Tobacco Tax Division.	thortzation	by Alcohol	Diethylene glycol monoethyl ether ac- etate, dms., c.l., frt. alid. E. lb.	.80	
matured sicohol, ethyl, SD2B, tanks, divd. E gal.	1.81	_	tanks, irt. alkl	.72	•
SD3A, tanks, divd. E gal. SD23A, tanks, divd. E gal.	1.76½ 1.86	<u>-</u>	worksb. Diethylenetriamine pentaacetic acid.	1.60	1.
SD23H, tanks, dlvd. E gel.	1,89	<u>-</u>	pentasodium sait solution, tank- cars/tanktrucks, irt-		
SD29, tanks, divd. E gal. SD30, tanks, divd. E gal.	1.721/2	-	equalized	.45 2.60	3
SD36A, tanks, divd. E gal. natured sloohol, ethyl, brucine formula	1.881/2	-	Digtycol laurete, drns., ton lots ib. Digtycol stearate, dms., t.l ib.	.321/s .62	
SD40, tanks, divd. E gal. ethyl, optional formula, SD40, tanks,	1.83	-	Dihydrazine sullate, dms., worksb.	1.10 48.00	i
of anhyd. alcohol on abova formulae, p	1.82½ 1.82½ xices are	20. per gal.	Dihydrostreptomycin sulfate, bulk kilo. Dihydroxyacetone, 50-kilo lots,	40.00	
higher. Vest Coast divd, prices are the sam			workskilo. Di-isobutyi ketone, tanks, divdib.	.60 .55	
except in Idaho, Oragon and Wa	ashington :	where a 5c.	Di-isobutyi phthalate tanka, divd. E. Ib. Di-isobutyiene, tanka, f.o.b. Hous-		
ssoxyephedrine hydrochloride (See N		stamine hy-	ton	.37 .40	
drochioride) atergent alkylate, atraight chain do-			Di-isononyi phthalate, tanks, divd ib. Di-iso-octyl azelate, tanks, divd. E ib.	.40 .99	1
decytbenzene, tanks, barges, f.o.b	.45	_	Di-iso-octyl phthalate, tanks, divd. ib. Di-isopropanciamine, dms., c.i., frt.	.40	
extrin, com, canary dark, paper bos., c.l., works, 100 lbs.	28.04	_	alid	.68% \$186.	
white, paper bgs., c.f., works100 fbs.	27.43	_	Di-Isopropylamine, dms., c.l. divd lb. tanks, same basisb.	1.17 1. <b>07</b>	
extrose, anhyd., coml., bgs., c.l., divd. New York 100 lbs.			Dilauryl 3,3-thiodipropionate, dms., t.l., frt. alldb.	1.89	
USP special, 100-lb, bgs., c.i.,	41.10	-	Dissoil, USP, drns	7.00 15.80	•
divd. New York 100 lbs. extrose, hydrated corni, bgs., c.i.,	48.60	-	Dimethyl benzyl carbinyl acetate, 25- b. dms	6.95	
divd. New York 100 lbs. Western zone 100 lbs.	24,25 25.60	-	Dimethyl carbonate, dms, t.l., f.o.b. works	.90	
lacetone alcohol, acetone free, tanks, dvd	.52	_	Dimethyl dichlorovinyl phosphate, 55- gal, dms., (.o.b b.	1.80	1
acetyl, flavor grade, dms	9.25	15.00	Dimethyl ethanolamine, anhyd., dms., c.l., divd. E	1,16	1
min. 18% N, 46% P. bulk, c.l., f.o.b. Fis. works ton	140.00	145.00	tanks, divd. E b. Dimethyl other, serosol grade, tanks,	1.07	
lammonium phosphate, feed grade. 18% N, 20% P, bulk, c.i., f.o.b.	140.00	140.00	divdb.  Dimethyl phthalate, lanks, f.o.b	.38	
Fla. works ton	240.00	-	works	.65	
bge , seme basis ton lammonium phosphate, tech., bgs.,	250.00	-	works	2.48	1
equald 100 lbs.	52.50	_	Dimethyl sulfato, ret. dms., c.l., f.c.b. works	.67 .46	
sis	57.75	_	tanks,	.59 .78	
4-Di-tert-amylphenol, min. 95.5%, dms., c.i., I.i., works, ib.	1.04	_	Dimethyl sulfoxide, tanks, works ib. Dimethylacetamide, bulk f.o.b ib.	.87%	
tanks, worksib. sarylide yellow, OT, (yellow 14), dms	.97	-	Dimethylamine, 25% soin., tanks, irt. equald., 100% basisb.	.631/2	
frt. alid	7.00	6.00	40% soin., tanks, frt. equald., 100% basis	.63\/ .54\/2	
MW 244, dms., t.l., dvd lb. ,8-Di-teri-Butyl-p-Cresol (see Butylate	4.25	-11	anhyd., tanke, irt. equald	1.03	
AUGULYI TUIHAYHTIB. 12UNKS. 1.O.H.			N. M. Dimethylformentide drie. O.L. U.	.57	
works	.77 .63	.85 .64	tanks same basisib.	,49 1,22	
Dibutyi phthelate, tanks, worksib. Dibutyi sebacate tanks, worksib.	.54 1,72	.60 1.89	2.4-Dinitrogniline, crange toner, CP, bgs.,	6.20	
Noutylamine, dms., c.l., dlvdib. tanks, aame basis ib.	1.12 1.08	=	2 4 Dickrocklorobenzetti, Crystalizing		
works	2.00	_	at 47°, t.l., t.b.b. Onlaws.b.	.98	
lused, dms., works lb. 3,4-Dichloroanline, tech. 88%, solid,	1.80	~	2.4-Dinirophenol, 200-p. Chief, 1505.	1.96	
dms., cl., tl., f.o.b. works . lb. Dichlorobenzene, tech., 80%, dms.,	1.48	1.57	Dinitrotokuene, mix., text	30	
C.L. i.l., divd	.52	-	2,4-Dinitrotoluene, dine., b.	1.25 1.20	
3076 (BiO., OMS., C.)., Sama he- elo ils	.45 .54	-	tanks, works.	.81	٠
tanks, same basis	A7	-	Dioctyl azelate, tanks, divd. E b.	40	·į
tanks, iid., same heele	.51 .43	.52 .47	Dioctyl phthalate, tanks, dvd b. Dioctyl sebacate, 99%, tanks, f.o.b. b.	1.47	
10.000 he or more works lie	0.00	-	1,4-Dioxana, tanka, frt. ald. E B.	1.13 1.21	. }
Dicyclohexylamine, dma. ol. +1		-	t.i., same pass	1,42	. 1
lanks, same hards	1.36	~	Dipentene steam-dist., tanks, (.o.b.	26 28	
dws	1.25	-	sulfate turnentine derived, tarika	201	: , : ;
98% tanks works	1,26	-	Diphenhydramine hydrochloride. USP	۱۱۷۸ ۱۱۷۸ افغهمان	M
98%, tanks, works	,36 .34	.36	dom. 1,000-kilo lots, kilo divd.	20.00	ابر
Committee the second surface, tanks,	41	_	dom., 1,000-lod lots. lig. divd. Diphenyl, 98,9%, bgs., o.b. lig. works. lig. tanks, works.		r' F
DOVP (see Dimethyl dichlorovinyl phos	pnate).		tanks, works.		ķ

Sept   1.   1.   1.   1.   1.   1.   1.   1									
Germent, Lab. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	vd., 5% roterione, basis, hos., t.l., works lb.	.60	_	Diethyl barbituric acid (see Barbital). Diethyl carbonate, tankwagose		_	and seeing the	1 11	1.20
Cont.   1.1   1.20	contract, f.o.bIb.		.14	Diethyl ethanolamine CP dies	1.40				1.20
Complete State Comple	i dma., c.l., l.l. frt.		1 27	tanks divd			Works, III. adulars Ib.		Ξ
2.5	shvde, 50% min. alde-		1.07	Liginyi etheroxiamina tach i oc combine.	1.10 Wer.	٠	octylated, Ifake, ogs., t.i., i.o.b.	7.68	_
Section 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	i		- 9.20	WORKS II.	1.80		Diphenylguanidine, bgs., t.t., trt. excl.	2.52	
seric, unifol. 10. 5. 39. 369.  5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5	s. , ,		- .9925	odoriess cosmetic grades + i		.88	:ibudantnin-800JUM USF.	5.00	5.60
Service State   1.50	lech., tanks, f.o.b B.			Diethyl sulfate, tanks, frt. alid F b			L	0.00	0,00
De devilement in Steine (1986)  5. Selfen bys. cl. 1-1.  1. Selfen bys.	ne tech., tenks, f.o.b.	.551/2	.581⁄₂	Diethyl thiourea, dms., c.l., i i	.59	-	polymeno, buik, c.i., flati. flo.		_
## A. ACC   1.0	divd lb.		-	I DI-2-ethylhexyl adipale (see Diochd sets:	2.48 (te).	٠ 1	B	.45	-
A. A. Code principles in each, and a second control of the control	ne, tecn., terks, ;b.	.85	-	Lietnyi tokuamkoe. 95-97% mka mola			dena C.L. CIVO		-
One-s, cl. (1.6.)  A. O'De hys., cl. (1.1.)  1.10 1.23  1.10 1.25				l WOTKE	2.75		n - midwenidine, nowd., 0018., I.I.,		_
Descriptions, and such as the control of the contro				I 0/115 C.I I.O.D	3.18	. ]	E 64 allel	2.92	-
A. Gibb Type, Ed., 11.  1. September 1. 10.  1. Sep				Diethylamine, dms., c.l., dlvd	3.10	•	11 (vt AN/d		.65
## control between the con				tarika, same basis		- 1	. rombout nhithalate, tanks, divol 60.		.65
A. 50-bit ps. 4-1-1.  1-10 1-25  1-2				works		-	Works		2.60
The second content of the content of	ch., 60-lb, bgs., c.l., t.l.,			Diethylbenzene, tanks, f.o.b. works ib.	QQ.	: 1	(ms, 100% basis		2.70
June 201 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ı, frt. equald fb.	1.10	1.25	DI-2-ethylhexyl azelate (see Dioctyl azela DI-2-ethylhexyl phthalate (see Dioctyl ph	110). Thaister		Dodecanyl succinic anhydride, ciris.,	.AA	_
prisonine and Lie, Lit.  1, 18	., works, frt, equald lb.		-	Diethytene glycol, tanks, dlyd, E, b.		31%	n-w-whenzene (see Deterpent Alkylate		
The second content was provided as a second provided		1.25	-	dms., c.l., frt. alid. E b.	.65		i i i i i i i i i i i i i i i i i i i	.48	.53
As d. m	s, frt, elid gal.	8.05	-	Diethylene glycol monoethyl ether,	.57	•	Dyes, coater, certified colors for food, drugs and cosmetics, 100 lb.		
Description dependent production groups   19th For Lot   1.5   1	<b>b</b> .		-	dma., c.l., frt. elid. E lb.			and over, frt, prepaid or alid	21 20	22.60
pares, 1947, 61. L. Juli, 200. 28. 0.00		.76	-	Diethylene glycol monomethyl ether.		-	No.2	29.15	29.22
Section   1.67	prada, 18% P. c.I. bulk,	106.00	228 00	tanks, frt. alld b.			Red FD&C, No. 3	24.00	65.00 24.50
Common processes   Common proc	shol, ethyl, CD18, CD19,		220.00		.80	_	Yellow, FD&C, No. 6		7.85 6.75
Substant Furth-Menics  March 25			by Alcohol	tanks, dlvd. E b.	.72	•	Dies, coater, certified colors for drugs	<b>U</b>	•
Math	obacco Tax Division.		. <b></b>	etate, dms., c.l., trt. alid. E. Ib.	.80		died.		
in direct E. gal. 1794 - 1886 of the control of the		1.81	_	Diethylenetriamine, tanks, f.o.b.	.72				-
persidential points of the property of the pro			-		1.60	1.61	Red, D&C, No. 4	18.85	-
ns. gho E	ınka, divd. E gal.	1.89	-	pentasodium salt solution,			Ko. 19	38.25	Ξ
Mathematical Continues   1.50   1.5			-	dibezilaupe			No.28		Ξ
Junion act   1.		1.881⁄≥	-			-			-
Barton   1994	tanks, divd. E gel.	1.63	-	Digiyçoi stearate, dms., t.l			No.8	20.55	40.00
continue touristics and membrated control constants, prices are 120, per gal control c		1.821/2	_	Dihydrostreptomycin sulfate, bulk kilo.			No.11		40.00
International Process   The Serims as Estatem prices			2c. per gal.	workskilo.		- 1	and paper dyaing (by Cotor In-		
Content   Cont	divd. prices are the san	ne as Easi	em prices,			.57	dex Name). f.o.b, works A6k   Blueblack ex. conc	5 75	_
Delegosopy phrimbins, preho, duct.   Delegosop			where a 5c.		.37	. \	0)65. A 519 251.06 2G jb.	5.46	_
Disaccock parts   Disaccock	rine hydrochloride (See I		tamine hy-	Di-isodecyl phthalate, tanks, civd ib.	.40	AP1	A \$2.90 Alizarina Br. Cv G (b)		-
Description	ylate, straight chain do-			Di-Iso-octyl azelate, tanks, divd. E. Ib.	.99		AV 16 6301 2G 3333%		-
calley float, piper piper.  sit. of 190 Ba. 28,04  injed, comit, pipes. of 1, 100 Ba. 28,05  injed, comit, pipes.		.45	_			•	AGREE Core	3.72	-
Description	canary dark, paper bos.,			alid		:	ALT TUNKOOLOG G. us	4.30	-
Discript   24.5   Discript	paper bgs., c.i.,	26.04	-	Di-isopropylamine, dms., c.i. divd ib.	1.17	: 1	904U		Ξ
Description	s	27.43	-	Dilauryi 3.3-thiodipropionate, dms., t.l.			AR 18Scadet 4FI Conc. III	8.85	-
New York. 100 be. 48.60 ordered comb, bp. cl.; 14.60 ordered comb, cl	New York 100 lbs.	41.10	-	frt. alldb.		825	I OPROTEST MAN A COMO III.	6.85	=
dried comb. bgs. c.l., New York. (100 bs. 24.25 - 100 bs. 24.25 - 100 bs. 24.25 - 100 bs. 24.25 - 100 bs. 25.50 lb. (100 bs. 25	New York 100 lbs.	48.60	_	Dimethylanthranilate dms	15.80	-	n n n n n n n n n n n n n n n n n n n		_
Dimestry   General Price   Dimestry   General	rdrated comi, bgs., c.i.,			l lo.dms	6.95	•	AY17 Fast I John Voll 90		_
June 1	ne 100 los.		-		.90	- 1	889Zinc Free	6.18	-
Dimethy elements and services are serviced productions and services are serviced productions are serviced productions are serviced productions are serviced productions are serviced productions.   1.6		.52	_	Dimethyl dichlorovinyl phosphate, 55-	1.80	1.90			Ξ
169 N. 4.679 P. Dufs. C.J.   140.00   145.00	or grade, dms		15.00	Dimethyl ethanolamina, anhyd., dms.,		1.18			-
Dimethyl philatels, tanks, 1.0.b   Dimethyl phila	18% N. 46% P. bulk, c.l.,			tanks, divd. E			By 10 Rhotemion D. F.	6.80	-
Month   Mont		140.00	145.00	) Dimaihvi ather, gerosci grace, tanks,	.38	-	DBI1Sky Rhun 89 Con-	10.10	_
Dimethyl sebsosis, Lanks, f.o.b   0.0	N, 20% P, bulk, c.i., f.o.b.	0.00.00		I Dimethyl phthalate, lanks, 1.0.0	.65		DRIAATTION OF THE LOCAL PROPERTY OF THE LOCA		-
100   bs.   52.50	leme basis ton		=	I Dimethyl sebagate, tanks, 1.0.0	9 48	2.68	DBk 22 Fast Black GR	9.45	-
Design	phosphale, tech., bgs.,			Dimethyl sulfato, ret. dris., C.L., I.C.C.			0 ar 230 Resin Fast Brown Billion		=
Directly sulficia, tarics, works   1.5	ikd 100 lbs.	52.60	-	works	.46	-	DGr28 Regio E-oat Co	7.23	-
Col.		57.75	_	Dimothyl guillidg, tanks, works IV.		:	OR24BF. Com		Ξ
Section 1, 100% basis.  10. 11. 11. 11. 11. 11. 11. 11. 11. 11.	mylphenol, min. 95.5%,		_	i Dimothulacetamicie bulk I.O.D	.871/2	•	ORRIFORD DO CONG ID.	6.16	-
Design	ks		-	Dimethylamine, 25% som, tanks, in-		-	UR251 Fast Coarded Att	6.85	Ξ
dilydrochlorided, 100%, 244, dams, Lt, levid, b. 4.25  ultyl-p Cresol (see Buythated hydroxylohuene) arrive, Lariks, Lo.b. b. 1.03  1.1. (s. b. 77 . 85  1.1	lld lb.	7.00	6.00	4094 gain tanks frt squaid., 10079		•	WS. Com 1500 go Trol Liq 10.		_
A.69   Common   A.69   Commo	dhydrochioride, 100%, 244, dms., t.l., dvd to.	4.25	_	anders (anka (ct. acus)),	1.03	-	9 Y 4 Brilliant Paper 14 11 D		-
NA-Dimetryl (cornamide, drins, o.).   L.   L.   L.   L.   L.   L.   L.	Ulyl-D-Cresol (see Butviate	d hydroxyl	oluene)	N.N-Dimetrylaritine, U., 1.0.0b.	1.11	•	24 British Danner to 10.		-
tale tanks, f.o.b. works b. 63 84 80 2.4-Diritronaline. tons-lois, i.o.b. b. 1.22 2.4-Diritronaline. tons-lois, i.o.b. b. 1.22 3.00% on the basis b. 1.72 1.88 Diritronaline. on tons-lois, i.o.b. b. b. 2.00 at 47°, t.l., i.o.b. Charlotte. 96 b. 3.05 b. 3.	(B b.	.77	.88.	N.N-Dimethylformanide, orns., o.i., ib.	.57	:	Conc. Yellow GA. Ex.		-
District	ate tanks, f.o.b. works . fb. Nate, tanks, works ib.	.63	.64	tanks, same basisb.	1.22	-	200% Yellow RGL Conc.		-
See	Pale lanks, works lb.	1.72		t Malizaaniina aranga mar, UC, 989	- 00		DSR 1 See Past Yellow L5Q Ib.		~
N.C.   15.   2.00   2,4-Dintrophenol, 250-0. dms., t.o.b.   1,95   1,00	1 <del>0</del> basisib.		Ξ	divd. E. of Hockies.			D MENUICEL A	4.26	-
Charlotte, N.C.  Charlo	roaniiine, flake, dms., kaih.	200	_	at 47°, t.l., 1.0.0. On the base. b.	.98	-	DIO SON SG	3.65	-
Dinitrotokens, mix., tech. 50. 30 by 28 Bordesux BV 200%. b. 17.25 by 28 Bordesux BV 200%. by 38 Bo	8., WORKS	1.80		2,4-Dinitrophenol, 200-to. Onle., 1555.	1.96	•	0s 0r 30 range GRA ib.	4.91	-
same basis. (b. 45 offs., c.i., same be-sis. (b. 47 offs., c.i., same be-sis. (b. 47 offs., c.i., same be-sis. (b. 47 offs., same basis. (b. 47 offs.) offs. (c.i., same basis. (b. 47 offs.) offs. (c.i., same basis. (b. 47 offs.) offs. (c.i., same basis. (b. 48 offs.) offs. (c.i., same basis.) offs. (c.i., sa	., al., t.l., f.o.b. works , <b>l</b> b,	1.48	1.57	Dinitrotokuene, mix., tecri. i.e.	.30	.A3	Devas Paste		-
tanks, works.  tanks, works.  tanks, works.  tanks, works.  tanks, works.  tanks, works.  tanks, dwd.  b. 47  Dioctyl adipate, tanks, dwd.  b. 43  tanks, dwd.  b. 13  tanks, dwd.  b. 147  b. 148  b. 147  b. 148  b. 148  b. 148  b. 148  b. 149  b. 148  b. 148  b. 148  b. 149  b. 149  b. 149  b. 149  b.	Id., Civil	52	_	WORKS.	. AE ·	. •	Dist 100 plue BGLF.	17.25	-
enzene, graded, 300-lb, seme basis b. 43 47  ocycle, graded, 300-lb, seme basis b. 43 58  ocycle, graded, 300-lb, seme basis b. 43 58  ocycle, graded, 300-lb, seme basis b. 56 58  ocycle, graded, seme graded, seme basis b. 56 58  ocycle, graded, seme g	, tame beels	AR		WORKS.	1,20	. 11		22.80	-
St. L. I. J. D. b. frt. equald. b. 51 52 Dioctyl phthelate, tanks, f. d. b. 147 Dioctyl sebscats, 96%, tanks, f. d. b. 148 Dioctyl sebscats,	i same besis	47	-	Discovery ampate, teams, that E	77	45	VBk 25 Olive TA Paste Ib.		=
Seme basis B. 43 47  Occupy secretary series by 13  1.4-Dioxans, tarks, frt. sid. E. B. 12  1.4-Dioxans, tarks, frt. sid. E. B. 12  1.4Dioxans, tarks, frt. si	enzene, graded, 300-lb.	24	F.9	Dioctyl azerate, tarke, divi				5.05	
1.4Dioxere, tanks, fr. alid. 1.5. and basis. 1.6. b. 1.36 1.6. b. 1.26 1.7. pointers steam-Clast., tanks, (o.b. 1.26 1.8. phittelate, bgs., cl., tl., lb. 1.9. phittelate, bgs., cl., tl., lb. 1.1. phittelate, bgs., cl., tl., lb. 1.1. phittelate, bgs., cl., tl., lb. 1.1	. Sama haska	10		Dioctal secacitie, as yet comments in	177	14	ł C		
noxycestic acid (see 2.4-D). samine, dma., cl., tl., b. 1.36 ne basis	UUU 108, OF THOMB, Wrisks lib	9 90	_	1,4-Dioxane, taraca, it is and it. Bo.	1.21	75.7			
Dipenters steam-dat, tanks, (a.b. 25 statistics, b. 1.26 statistics, b. 1.26 statistics, b. 1.26 bigs, c.l., t.l., t.l	noxyacetic acid (see 2,4-D famine, dma., o.i., +1	).		Dibetuseryunitor, phys., co., p.	41-40-6	1.			
phthelate, bgs., cl., t.l.,  sulfate turpentine derived, tanks, ib.  tadlane, high-purity, 97-  tanks, works  b. 36  cline, tanks, frt, aid  b. 34  cline tauryi sulfate, tanke.  cline, tanks, frt, aid  b. 34  cline tauryi sulfate, tanke.  cline, tanks, frt, aid  cline, tanks, works  cline, tanks, works  cline, tanks, tanks, frt, aid  cline, tanks, works  cline, tanks, works  cline, tanks,	M	494	~	mine a second chet tanks, (.O.D.	26	7		-	
Dipheritydramine hydrochloride, difference of the hydrochloride, NF, cryst, discount of the hydrochloride, NF, cry	! Paradetero, DCB., C.I., †.I.,		-	PIR WOLKS	1.	g alle Tyl	ighedine	7.00	-
Attention works. Ib. 35 dom. 1,000-kdo lots, one attention works. Ib. 34 36 dom. 1,000-kdo lots, one attention works. Ib. 34 36 dom. 1,000-kdo lots, one attention works. Ib. 34 36 dom. 1,000-kdo lots, one attention works. Ib. 41 works. Ib. 41 works. Ib. 41 works. Ib. 41 dom. 1,000-kdo lots, one attention works. Ib. 45 dom. 1,000-	tediene, high-nurity, 97.	1,26	-	DIS ON 1866 1 SE BOOK ON A MARINE USP	r '	aidi.	Shedden annyd., USP, 80-oz.		-
Diphenyl, 98.9%, bgs. 0. 1 tanks, bottomytin, tanks, divd. 10. 41. 10. 10. 10. 10. 10. 10. 10. 10. 10. 1	™, tanks, works, lb, Mag, tanks, frt, alid	,36	-	dom. 1,000-kilo kots, oms.	20.00	<b>W.W</b>	The state of the s		-
Officethyl dichlorovinyl phosphate). tanks, works	FUND BULLYI SIJIYAYA YARINA		,30	Diphenyl, 99.9%, bgt., 6-11.		eren Paris	שומו אומטוס וואוייייי אומטוס אומטוס	38.25	40,25
	Dimethyl dichlorovinyi phod	, 41 (phate)	· <del>-</del> .	MOINE,	1.17		rendering tenker, cityd kilos kilo		45.28
		-	•		3 1 2		, HO,	.d5	-
	100				The Property of				0 a

-	عروه والمالي المرابعة المرابعة المالية المرابعة المرابعة			
	Epinephrine base, syn., USP, bots., 100-gram lotsgram	.60		Ferricohio
	Solid, bos., t.).	1.31	1.41	_ C8
	Epsom salt (see Magnesium suifate). Erythorbic scid, powd., gran., 100 lb.	1.281/2	1.331/2	Ferric nitre Ferric oxal
	cause or or wixed (1) (0.P)	440	4.55	ferric oxid
	Ester gum, gum-rosin type, dms., c.l., divd., ill., Md., ky., E. States, Minnagrolis, N. C. Oke, St.	4.10	4.25	Ferric phos de
	Louis St Paul Vo W Vo B	75		Ferric pyro
	Ester gum, wood-rosin type, dms., c.l., same basis	.75	-	Ferric res
	Ethyl acetate, syn., 85-88%, tanks, divd	.43	.46	Ferric sulfa bgs., c.i., v
	99%, tanks, dvd	.41 .41/2	.41½ .42½	Ferric am
	Ethyl acrylate, tanks, fot allo	1.13 1.05	2	gr 2.
	Ethyl alcohol, syn., 190 pf., USP tax free, tanks, divd. Egal.	.66 1.55	_	pi 2c. per poi
	Ethyl alcohol, absolute, 200 pf., tax f than 190 pf., tax free,	1.55 ree prices 1	2c. higher	Ferric-amr
	Ethyl alcohol, fermentation, tanks, f.o.b. worksgat.	1.06	1.28	Ferric hyd
,	Ethyleicohol, denet (see Denet und elec	e tex incent	1.20 1 <b>ves</b> .	80
	Ethyl penzoate, dwa.	aine). 1.35	1.50	t.( agricuiti
	frt. alid. E	.76	-	dy odin
	Ethyl butyrate, dms	1.35	1.50	Ferrous fit.
ı	ogs., LL, fri. equald. Elb. standard vis. 10.20, 45, 100 cos	4.55	-	Ferrous gl
1	t.i., irt. equald. E lb. medium vis., 50, 70, 100 cps., t.l. frt.	4.17	4.22	Ferrous s
	equald. E	4.25	-	, w
	USP 10.20.45.100 bgs. t.l. to	4.8B	-	heptahy W monohy
İ	VSP (medium) 50,70,100 bgs., t.l.	4.59	4.69	USP, po
	Ethyl chloride, tech., cvis., frt, alid., ib.	4.51 .26	_ .28½	Cryst., 2
	tanks, irt. alkiib. Ethyl chnamate, dmskilo	.24 41.00	.261/2	Fir off, Can Siberia,
	Ethyl ethanolamines, mixed, dms., t.i., divd. E	1.23	_	Fish oil, re kettle-b
1	Ethyl ether, refined, tanks, f.o.b	1.15 .46	_	light, co tanks.
	Ethyl hexanoate, dmsib. 2-Ethyl hexolo acid, dms., c.l., t.l., divd.	4.25	4.75	Fishmeal P
	tanks divd. Eb.	.63 .57	Ξ	1.0.b.
ļ	mixed, tanks, frt, alid, E ib.	.79.6	_	imp., b
	2-Etnyinexyi alcohol, lanks, givd ib. Ethyl lodide, cbys., works	.35 6.25	-	Fluoboric
1	Ethyl Inalcol, syn. 55-gal. dms lb.	10.60	-	Fluoroca
ł	cmsb. Ethyl methacrylate, tanks, frt	10.85	-	No. 12
1	equaldb. n-Ethyl morpholine, dms., t.i., frt.	1.06	-	No. 22, No. 113
Į	alid b. tanks, same basis b.	2.00- 1.92	_	No. 114 Fluositicio
Į	n-Ethyl-a-naphthylamine, dms.,	1.04	_	Formalde
- [	worksb. Ethyl oxalate (see Diethyl oxalate). Ethyl parathion (see Parathion, ethyl).			44-4
	Ethyl silicate dist. (see Tetraethyl orthosi Ethyl silicate, 40% available SiO <sub>2</sub> ,	licate).		37% d
Ì	drns., t.l., 1.o.b. worksb. tanks, f.o.b. worksb. N-Ethyl-m-toluidins, tech., liq., drns.,	1.45 1.39	1.48	37%
	C.L., t.Q.D , ,	3.18	_	Formamid dm
ı	tanks, same basis	3.10 2.85	2.90	Formia (
١	Ethyl vanillin 100 lb. dms., 500 lbs. or more	13.50	-	959 Fructose,
ľ	100 lb. dms., less than 500 lbs lb.	13.75 14.00	14.50	de Fumaric s
1	Ethylamina (see Mono-Di- and Tri-) N-Ethylaniline, dms., c.i., t.i., t.o.b.			tech. g
Į	workslb.	1.66 1.58	Ξ	l ē
ľ	Ethylbenzene, bulk, f.o.b. Houston, Texb.	.22	.23	Furturel, ( lo Furtury) ak
ł	Ethylene, contract, divd b. Ethylene brassylate, dms ib.	.18 18.00	.181⁄2 18.25	T
	Ethyleneckamine, 99%, tanks, f.o.b. works	1.30	1.305	
1	Ethylenediamine dihydriodide b. Ethylenediamine letraccetic acid, te-	7.55	9.26	
	trasodium sali, soin., t.c., t.t., frt, equaldib.	.361/2	-	
	Ethylene dibromide dms., c.l., frt., equaldb.	.38	.46	
ļ	tanks, frt. equaldb. Ethylene dichloride, tanks, f.o.b.	.32	.42	Gealt, dmi Gellic acid
	works	.17	.1714	Garlic oli, o Galatin, ed
1	Ethylene glycol, monobutyl ether,	.31	-	125 A
	tanks, divd. E b. Ethylene glycol monoethyl ether,	.41%	-	150 A 175 A
Ì	tanks, divd. E	.51	-	200 A 225 A
ļ	tanks, divid. E	.34	-	250 A 276 A
Ĭ	etate, tanks, frt. alid. E lb. Ethylane glycol monoethyl ether so-	.641/2	-	300 A Gentien vid
1	elate, tanke, ft. alid., E D. Ethylene glycol monomethyl ether so-	.551/2	-	Geraniol, s
	etate, tanke, frt. alid. Eib. Ethylene oxide, tanke f.o.bb. Ethylene trichloride (see Trichlorcethylen	.43 .35	.45	syn. 96-4
1	Ethylene trichloride (see Trichlorcethylen Eucalyptol, NF, dms. Portuguese .kilo. Eucalyptus Citrisdora Oil, Chinese kilo	. 7.60	<b>-</b> ·	Bourbor
-	Eucalyptus Citriadora Oil, Chinese kilo Eugenol, USP, dms	3.05 7.55		Egypt Turkish (
ا '				Genanyi ac nat., dini
1				Geranyi for
				Gilsonite,
ŀ		<u> </u>		selects, Ginger, Co
۱	Fennel oil, sweet, USP, ons lb.	9.00	.68	Chinese Ginger oil
f	Fermel seed, Egypt	59 .87	.95	Indi

amiotegram	- 00		I				
ıkd, bulk tanks, divd ib.	.60 1.31	4.44	Cent basis, to b works tenk				
	1.2812	1.41 1.33%	J WORKB ton	176.00	255.00		-
e Magnesium suriate).	1.2972	1.0072	I PURCHINEN CYMET AMO II IAA B	.84		CHEMIC	
. DOWG., aran. 100 lb			i rottic uxalate, tech., dryn, 50-th, dm				# <b>E</b> E E
LL or mixed t.l. f.o.b.			1 (A/A), WOOKS 16	1.65	~		
	4.10	4.25	I LALLIC AXIOOR 1960 BUTU CIANVAN	.,,			
n-rosin type, dms. c i	7.10	4.23	Ferric phosphata, FCCq insoluble pow-			PRICES	١
II., Md., Ky., E. States			I DBC. CITTS. 10 OCO IIva ins.	1.10	1.15		•
apolis, N.C., Ohio, St.			I FULLIC DVICONOSONATA, RANINA AURIF		1.10		
St. Paul, Va., W. Va. fb.	76		I 1768/18,513-10,dm ih	1.11			
od-rosin type, dans., c.i.	.75	-	Ferric resinate, precip., 6.75% Fe.	1	-		<i>,</i>
Asia b.	40		dms., ton lots frt. eld b.	48			
ayn., 85-88%, tenks	.43	.46	Ferric sulfate, partly hydrated, 100-ib.	.45	-	14 million market and the same of	
			bgs., c.i., worke ton			WEEK ENDING NOV 14,	1986
rka, dvdlb.	41	.411/2	bulk, workston	141.00	-		
stedme of died in	411/2	.421/2	Ferric ammonium citrie, NF, brown,	117.00	-	Glue, bone, extracted, green, jelly-	
tate dime., c.l., divd lb.	1.13	~	TOTAL BUILDING CHEEN, NE, DOWN,				
anks, frt elid	1.05	-	green gran. 100 lb. dms.			grams, bgs., cl lb.	-
man 100 of Lich L	.86	_	2,000 to. min., f.o.b. shipping			85 ellygrams, bgs., a.l., f.o.b lb.	.86
syn., 190 pf., USP tax			pt	2.00	2.95	116 ellygrams, bgs., c.l., f.o.b ib.	.78
inks, divd. E gel.	1.55	<del>-</del>	2c. per pound surcharge for shipments to	W. of Denvi	er .	135 jelfygrama, bgs., c.l., f.o.b fb.	.77
, absolute, 200 pf., tex f	ree prices 1	12c. higher	i Perric-ammonium oxalala, ilna dran			164 jellygrame, bgs., c.l., f.o.b,lb.	.79
ay pi-, tax tree,		_	250-lb. dms., t.l., l.o.b. works.			192 jellygrams, bgs., c.l., f.o.b, lb.	.87
fermentation, tanks,			I Francisco de la Companya de la Com	.42	-	220 jallygrams, bgs. c.l. f.o.b lb.	.93
vorksgat	1.06	1.28	i Ferric hydroxyethylene dieminatri-			Grue, hide,	.00
tiributable to various stat	te texincen	tives.	scetic acid, industrial grade,			108 jelygrams, bgs., t.l., f.o.b lb.	.80
BiiBii. (6 <b>00 Denatura</b> d Akk	Shot albub		sodium salt, soln., 4.5% Fe.			195 left wrome has all the le	
Brizoale, NF (see Berizoc	aine).		t.c., t. t., f.o.b. works  b.	.55	_	135 jellygrams, bgs., t.l., f.o.b ib.	.86
CUTTER	1.35	1.50	agricultural grade, sodium salt solu-	.00	_	164 jallygrams, bgs., t.l., f.o.b lb.	.90
tech., 98%, dmg., a.i.			tion, 5% Fe, t.c., t. t., f.o.b.			192 elygrams, bgs., t.l., f.o.bib.	.95
· E	.76	_	works			<b>222 jellygrams, bgs., t.l., f.o.b., ib.</b>	1.00
dmaib.	1.35	1.50	Ferrous fluoborate liq. conc., dms., t.i.,	.84	-	251  #lygrams, bos., t.l., f.o.b., lb.	1.05
standard vis., 7 cos.			in a rough to a rold			283 jellygrams, bgs., Ll., f.o.b., Ib.	1.10
L. frt. equald. E Ib.	4.55	_	works, int. equald ib.	.64	-	316 jellygrams, bgs., t.L, f.o.b lb.	1.16
. 10. 20. 45. 100 cns.		_	Ferrous gluconate, NF, t.I., works E.io.	2.25	-	347 jellygrams, bgs., t.l., f.o.b lb.	1.20
equald. E Ib.	4.17	4.22	Ferrous naphthenate, Ilq., 6%, Fe.			379 jellygrame, bgs., t.l., (.o.b., lb.	
50, 70, 100 cpe., t.L. frt.	7.11	4.22	dms. divd lb.	1.17	-	Attickureme has to fall the	1.25
Е	4.25		remous surate, moist, bulk, t.l. f.o.b.			411 slygrams, bgs., t.l., f.o.b lb.	1.30
ps bgs., t.l., frt. equald.	4.20	-	workston	30.00	-	444 jellygrams, bgs., t.l., f.o.b jb.	1.35
po ogos, ens, ne ociono.	A DD		heptahydrate, gran., bulk, t.l., f.o.b.			477 jellygrame, bgs. t.l., f.o.b., lb.	1.40
45,100 bgs., t.l., frt.	4.88	-	Works	148.00	150.00	Glutamic acid, 99½% dma., 100-lb.	
E 100 Dys., t.i., Ift.	4.50		monohydrate, gran., bulk., t.l., f.o.b.			lots, fri. alid kilo	6.65
.Eb.	4.59	4.69	I WORKS ton	170.00	180.00	Glycerine, nat., reld., USP, CP 9971%	
n) 50,70,100 bga., t.l.	4.54		USP, powd., 400-lb. dms lb.	.49	100.00	tanks, divd , fb.	.891/2
ueld. E	4.51	-	cryst., 250-lb. dms lb.	.61	-	USP, CP, nat. 96%, tanks, divd., ib.	.8734
ech., cyls., frt. alld jb.	.26	.281/2	Fir of, Canada dms	10.00		Syn. 96%, tanks divd ib.	.8914
t. alkib.	.24	.261/2	Siberia, dms		-	Syn. 99.5%, tanks divd	
dmskilo	41.00	-	Fish oil, refd., alkali, tanks, c.l lb.	12.75	-	Chroine from Aminon costs and D	.91
nines, mixed. ams., t.i.,			koldo hodiad tooka	.29		Glycine (see Aminoacetic acid).	
<u>.</u> <b>lb.</b> .	1.23	-	kettle-bodied, tanks lb.	.32	.36	Glyceryl gualacolete, 100-lb, fib, dms.	
.Eb.	1.15	_	light, cold-pressed, dms., a.llb.	.34	-	f.a.b klka	14.50
ned, lanks, f.o.b (b.	.46	_	tankslb.	.28	-	Glycolic acid (see Hydroxyacotic acid)	
8, dmg lb.	4.25	4.75	Fishmeal, dom., menhaden, 60%			Glyoxal 40% soin., bulk, tanka,	
cid, dms., c.i., t.i., divd.			protein grd., bulk, f.o.b. At-			dlvdb.	.441/2
lb.	.63	_	l lantic port ton	295.00	-	Grapefruit oil, Fis., dms	3.00
	.57	_	f.o.b. Gulf part ton	290.00	-	Calif., dmsib.	3.00
acrylate, straight or			imp., Chilean, 65% protein min.,			Israeli	3.00
tanks, frt. alld. E ib.	.79.6	_	bulk, c.l., t.l., ex whee., 1.0.b.			Graphite, emorph, powd., bgs., dms.,	3.00
ohol, tanks, clvd ib.	.35	_	Atlantic and Gulf portston.	285.00	_	ex what	• •
ys., works	6.25	_	Fluoboric acid, dms., t.i., works, tri.			DA WISD	.16
n. 55-gal. dms lb.	10.60		equaldlb.	.70	_	cryst., 88-90%, powd., bgs., dms.,	
cetate, syn., 55-gal.	10.00	-	Fluorocarbon, No. 11 bulk, tanks,	.14	-	ax whee	.30
b.	10.85	_	delvdlb	.57	.64	Graphite, cryst., 90-92%, powd., bgs.,	
crylate, tanks, frt.	. 0.03	-	No. 12, bulk, same basis ib.	.68	.74	dms., ex whselb.	.40
y.u.o. culino, iit.	1.06	_	No. 22 bulk, same basis in			95-96% powd., bgs., dms., ex	
noline, dms., t.i., frt.	1.00	-	No. 113, bulk, same basis ib.	1.05	1,14	whselb.	.60
b.	9 00				,931/2	Graphie, amorph., cryst., 97% and up.	
D	2.00-		No. 114, bulk, same basis ib.		1,08	powd., bgs., dms., ex	
hthulamine des	1.92	-	Fluosificio acid (see Hydrofluosificio aci			whse	.80
hthylamine, dms.,	4.04		Formaldehyde, 37% methanol free (un-			Granbita fieka No. 1 CO.0594 has	.00
	1.04	-	Inhibited) divd., gulf lb.		.0905	Graphite, flake, No. 1, 90-95%, bgs.,	
se Diethyl oxalate).			44-45% (1% methanol) tanks,			dms., ex whseb.	-65
(866 Parathlon, ethyl)			divdlb.	.101	5 ,1065	No. 2, 90-95%, bgs., dms., ex	
t. (see Tetraethy/orthosi	iicale).		37% (inhibited 7% methanol,			whse	.65
40% available SIO,			divdfb.	.094	5 .1026	Grease (See Oils, Fats & Waxes market	report)
i., i.o.b. worksb.	1.45	1.48	37% (inhibited 11-15% methanol)			Grease (ii) (See Lard oil).	
o.b. works lb.	1.39	-	tanks, divd	.105	5 .1060	Gualacol, tech., 500-lb dma., 24,000/b.	
dine, tech., ilq., dms.,			Formamide, tanks, f.o.b lb.	.39	_	min., f.o.b. Wallingford,	
.b , , lb.	3.18	_	dms., same basis ib.	.44	-	Conn	2.70
vne basis ib.	3.10	-	Formio acid 90% tanks, f.o.b.			Gualacwood oil, dms	3.75
ine, dms lb.	2.85	2.90	workslb.	.364			V.7 U
0 lb. dms., 500 lbs. or			95% dris., c.l., works	.51%		Guar gum, edible, bgs., c.l., f.o.b.	EC
lb.	13.50	-	Fructose, cryst., 18,000 kilos or more,	.qty		ship't pt	.50
00 lba. or more lb.	13.75	_		00	1 02	Indust., bgs., high viscosity, c.l.,	
less than 500 lbs lb.	14.00	14.50	dms	.90	1.03	same basis ib.	.50
Mono-DI- and Tri-)	00		Furnaric sold, food grade, bgs. t.l., frt.	751	7712	وبالنوان ويوكيون كالباكار	
dms., c.l., t.l., f.o.b.			equald. E	.75%	.77%	! _ <del>_</del>	
b.	1.66	_	tech. grade, bgs., t.l., f.o.b. frt.		ph.		
pasia	1.58	-	equaldb.		.621/2		
	1.30	-	Furtural, tanks, 1.o.b. Cedar Rapids,				
bulk, f.o.b. Houston,	99	99	lows, and Belle Glade, Fis. lb.	.75	-		
	.22	.23	Furfutvi sloohol, tenks, f.o. b. Memohis.				

, 1.5.5. Cedar Hapids, and Belle Glade, Fia. ib. I, tanks, f.o.b. Memphis, and Omaha, Neb ib.	.75 .72	- -	П		
			Heliotropin, dmsb.	6.00	6.25
			Hemlock oil (see Spruce oil). Henbane leaves, bis	,55	-
			mont, Texgal. 95%, tanks, f.o.b. Houston.	1.07	-
	_	إناسيس	Taxgel.	1.18	-
. alid. 100% basis Rb.	2.30	_	Heptanok eckl, syn., tanks, f.o.b	.65	-
kilo lota kilo Egyptian kilo	23.08 100.00	110.00	I-Hexadecanol, syn., tanks, f.o.b lb. Hexahydrophthatic anhydride, tech.	.4314	-
100 AOAC test, dms.,			dma., i.t.l., i.o.b. works ib.	1.42	-
rd	1.53	1.75	Hexamethylenetetramine, gran. bgs.,		
lest, dms., Lt.L lb.	1.75	1.85	c.L. t.J., works b.	.55	<b>-</b> '
test, dms., i.t.l lb.	1.85	1.95	gran. dma., c.l., t.l., works . , ib.	.69	
test, drns., l.t.llb.	1.95	2.05	pdr. bgs., c.l., t.l., workslb.	.80	
test, dma., l.t.l lb.	2.05	2.15	powd. dms, c.l., t.l., works fb.	.63	_
test, dms., l.t.l fb. test, dms., l.t.l lb.	2.10 2.20	2.25 2.35	Hexane, indust., tanks, worksgel. 95%, tanks, f.o.b. Houston,	1.01	1.18
teat, dms., i,t.i 10.	2.30	2.45	Ten	4.40	



November 11, 1988

C	H	EN		CA	L
P	R	C	I,		

WEEK ENDING NOV1	1 1000	
WEEK ENDING NOV 14	+, 1966	
Kydrochloric add, 20° Be, tanka,		
works, East ton	55.00	65. 70.
Mktyvest ton Gulf Coast ton		70.
		105.
West Coast	88.00	76.
Midwestton	66.00	70.
Gulf Coast ton		
West Coast ton	100.00	115.
NOTE: Prices very and are either freign lized depending on producer a	<b>aut conect me</b> Tut conect me	agnt (
Hydrocartisone acetate, micronized,		
dms., 25 kilos or more . gram. Hydrocortisone, alcohol, micronized,	.70	•
dms 25 kilos or more . gram.	70	
hrydrotiuroric acid, anhyd (888 htydroge	un l'illicinicie)	
Hydrofluoric adid. adueous. 70%	•	
tanks., f.o.b. frt.	40.00	
equald	43.00	
works, 30% basis ton	-	
tanks, 100% basis, works ton		210.
Hydrogen bromide, anhyd. cyls., extra,		
30,000-lbs., f.o.b. works lb.	7.00	
Hydrogen chloride, anhyd., 50-lb. cyls.		
C.I., works	65 .62	•
600-lb. cyls., c.l., same basis lb. Hydrogen chloride, anhyd., tube trall-	02	
ers, seller's trailer, min.		
100,000 tos a year lb	.37	
tube traffers, buyer's traffer ib.	.27	
Hydrogen chloride anhyd., tanks,		
Works	270.00	•
Hydrogen cyanide, ilq., 99.5%, tanks, works	.50	
Hydrogen fluoride, anhyd., tank cars		
C.L. Lo.b., irt. equald lb	6875	
Hydrogen peroxide, 35% tech., tanks		
works, ft. goualdlb.	.2325	
50% tankcara, frt. equald lb	.3225	•
70%, tankcare frt. equald lb Hydrogen sulfide, ltq., 99.25% min		
seller's lanks, workslb	12	
170 lb. cylinderslb.	2.27	
Hivaraquinane, photo arade, consum-		
era. c.l., t.l., divd lb	. 2.54	•
tech., dms. c.l., divd	1.95	•
Belle, W. Va	.491/2	_
Hydroxylammonium sutfate, dms., t.l.	<i>/-E</i>	_
f.o.b	.83	. •
p-Hydroxybenzene sulfonic acid (see p	-Phenoleulic	VIIC T
Hydroxybutyl methylcellulose tylsc 12,000 cps (50 fb, bags, fl., cl		
30,000 lb. min., divd., zone		
1b	2.10	
Hydroxycitronellal dimethyl acetal		
dmsb	16.55	
p-Hydroxydiphenylamine, dms., t.i.		
f.o.b. works	4.10	-
natural, dina b.	9.40	
pure, ams b	13.60	
extra grade, dmsb	. 14.80	
syn., drns	9.50	_
Hydroxyethyl mathdeatidea (***)	2.07	2
Hydroxyethyl methylcellulose (visc 5,000 through 45,000 cns.) 5	i	
5.000 through 45,000 cps.) 50 b. bags, tl., c.l., 30,000 b		
/FII N., (01V(J., 20Y)) 1	. 2.73	
	:	
Hydroxypropyl methylcelulose, pre	)	
Mydroxypropyl methylcellulose, pre mium. U.S.P. (visc. 4.00)	•	
mium, U.S.P. (visc. 4,000 through 15,000 50 lb. bacs		
hydroxypropyl methylcelulose, pre mium, U.S.P. (visc. 4,000 through 15,000) 50 lb. begs Lt. ct., 30,000 lb. min., dvd.	2.87	
Mydroxypropyl methylcellulose, pre mium, U.S.P. (visc. 4,000 through 15,000) 50 lb. bags LL. c i. 30,000 lb. min., dvd. zone 1	2.87	
Mydroxypropyl methylcellulose, pre mium, U.S.P. (visc. 4,000 through 15,000) 50 lb, bage LL, c I., 30,000 lb, min., divd. 20ne 1	2.87	
hydroxypropyl methylcellulose, pre mium, U.S.P. (viac. 4,000 through 15,000) 50 lb. begs Lt., ct., 30,000 lb. min., dvd. zone 1	2.87	
hydroxypropyl methylcellulose, pre- mium, U.S.P. (visc. 4,000 through 15,000) 50 lb. bags Li. c.f.,30,000 lb. min., dvd. zone 1	2.87	
hydroxypropyl methylcellulose, pre- mium, U.S.P. (visc. 4,000 through 15,000) 50 lb. bags Li. c.f.,30,000 lb. min., dvd. zone 1	2.87	
hydroxypropyl methylcellulose, premium, U.S.P. (visc. 4,000 through 15,000) 50 lb, bags LL, c L, 30,000 lb, min., dvd. 20ne 1	2.87 2.87 3. 2.99	
hydroxypropyl methylcellulose, premium, U.S.P. (visc. 4,000 through 15,000) 50 lb, bags LL, c L, 30,000 lb, min., dvd. 20ne 1	2.87	
hydroxypropyl methylcellulose, premium, U.S.P. (visc. 4,000 through 15,000) 50 lb, bags LL, c L, 30,000 lb, min., dvd. 20ne 1	2.87	
hydroxypropyl methylcellulose, premium, U.S.P. (visc. 4,000 through 15,000) 50 lb. bags Li., c.l., 30,000 lb. min., divid. zone 1	2.87 2.99 2.17	
hydroxypropyl methylcellulose, premium, U.S.P. (visc. 4,000 through 15,000) 50 lb. bags Lt. cf., 30,000 ib. min., divd. zone 1	2.87 2.99 2.17	
hydroxypropyl methylcellulose, premium, U.S.P. (visc. 4,000 through 15,000) 50 lb. bags Li., ci., 30,000 lb. min., dvd. zone 1	2.87	
hydroxypropyl methylcellulose, premium, U.S.P. (visc. 4,000 through 15,000) 50 lb. bags LL, c i, 30,000 ib. min., dvd. zone 1	2.87 2.99 2.17 2.17	

Ichthammol, NF, 200-kilo dms lb.	4.25	4.50
iminodiacetic acid, 96% min., dms.,	71.20	7.00
c.l., t.t., works	3.00	_
indolo, dans	25.50	_
Inositol, 50-kilo dms., 1000 kilos or		
more, f.o.b. works kilo	17.50	22.00
lodine, crude, dris kilo	13.50	18.00
lodine USP	14.21	14.59
logochiornygroxyguin, USP, XVI 50-		
kJo dms., 100-499 kilos, in.	AF 44	
ledeform, NF, dms., 300-lbs., f.e.b.	35.00	45.00
warks	24.00	
a-konone dims	18.20	-
b-konone.dmsb.	13.10	-
Inecac root, whole, bgs	25.00	-
irish moss, bleached, prime,	20.00	_
wholethe	.55	.60
fron blue, alkali-resisiant, bgs., i.c.l.,		.00
ton lots, dry. E	2.70	_
fron blue, reg., bgs., i.c.i., ton lots,		
same basisib.	2.00	2.15

	iron, purif., powd., palls, 10-100-lb.	1.00		Lake C, rad toner, (red ald
	fron oxide, black, syn., bgs., c.l., frt. equald	.681/2	.75%	Lanolin, anhyd., cosm dms., works
	iron oxide, brown, syn., bgs., c.l., irt. equaldb.	.68	.7812	pharmaceutical, 4 workstech., (under 2% 1
	tron exide, metalic brown, i.c.i., bgs., frt. equaldib.	.13	.15	drys., works Lard (See Olls, Fats & W
	iron oxide, net., red., dom., pure, bgs., c.L., worksb. iron oxide, yellow,ib.	.275 .18	.40	Lard oil, No. 1, dms., c.l., tanks, same basis Lard oil, extra, winter-s
	syn., bgs., c.l., frt. equald lb. iron oxide, buil, nat., dom, bgs., c.l.,	.63	.71	C.I
	t.l., works, lightib. darkib.	.75 .60	. <b>8</b> 0 -	prime, burning, drita., sia. Chicago
	other shades, bgs., c.l., frt. equald	.50 1,40	.55	prime, burning, (and sig. NOTE: 300 Mi. red. 1 Va
i	Isatiolo entrydride, bgs., f.o.b. works lb. Isoamyf alcohol, 95% tarks, frt. alld	1.44	1.48	Cosst, 3c. highs Laurel leaves, Turkish
	Isobornyi acetate, drns	7.25 .80	1.15	Laurent's scid, drums, f. Lauric scid, comi., pure i
	Isobutyi acetete, solvent grade, tanks, frt. alld	.45	.48	Lauric aidehyde (eide dma n-Lauryi methacrylate, i
•	Isobutyl acrylete, tanks, frt. ald. E lb. Isobutyl elcohol, tanks, divo	.71 .29	-	works Levendin oil, Abrialis, 30
	isobutylene, 99%, tanks, f.o.b. worksib. isobutyl isobutyrate, tanks, f.o.b.	.32	-	Lavender flowers, ord medium, bla
	works	.42V <del>.</del> .87	_	select. bis
	Isobutyi phenylacetate, dms lb. Isobutyi salicylate, dms lb.	3.10 3.45	3.50 -	apike, Spanish, dma. Lead acetate, purif.
	isabutyraidehyde, tech., dms., c.i., divd	.43	-	dms., works. tech., (lake, t.l.,
	tanks, divd	.35 No Pri .76	ces	works Lead blue, basic, sulfa ship,t, pt., f.o.b.
	isobutyronitrie, dms., c.i., f.o.b. works frt. collect	.84	_	Lead carbonate (see Le Lead chloride, 400-lb. dr
	tanks, same basis	.75 5.20	5.60	Lead dloxids, tech., p dms., t.l., works
	isoniazid, powd	12.00 d).	-	Lead fluoborate, Iq. co works, int. equa Lead metal, divo
Ì	iso-octyl alcohol, dms., t. i ib.	.48 .44	=	Lead monosilicate, mili
	Isophorone, tankedivdib. Isophthalic acid, 99%, bulk, f.o.b., Joliet, III., min. frt. alidib.	.81 .46	_	coarse, bgs., cl., sam Lead naphthenale iiq., :
	Isophithalonitrile, bgs., t.l., works ib. Isopropyl acetate, tanke, divd ib.	2.65 .47	Ξ	frt. alld Lead nitrate lech., cryst. t.l., works
i	laopropyf alcohol, anhyd., 99%, tanks, divdgat.	1.38	-	Lead peroxide (see Lead Lead red. 95% Pb.O., o
ì	reid., 95%, tanks, divd gal. reid., 91%, tanks, divd gal.	1.31 1.25	=	works Lead red, 97% Pb <sub>3</sub> 6
	Isopropyl ether, tanks, divd b. crude, tanks, divd lb. isopropylamine. (see Mono-, Di-or Tri-).	.44 .37	_	works Lead, red, 96% Pb <sub>3</sub> O <sub>4</sub> , basis
l	Isopropyi myristate, dma., t.l., Eb. Isopropyi myristate, dma., t.l., Eb.	1.19 1.45	1.50 1.48	Lead silicate (see Lead, Lead silicochromati
				works Lead sulfate (see Lead basic sulfate)
				Lead, white, basic carbo frt. ald
ı	J			Lead, white, basic, silk same basis
				Lead, white, basic auf same basis Lecithin, edible, tech.,
	J acid, paste, dms., works, 100% ba- 6lskilo	4.75		ret, dms., i.c.l., unbleached non-re
	Japan wax, cs	5.50	6.60	samé basis edible, tech, bleac
ļ	producing point	30.00 120.00	40.00	dms., tl., work unbleached, non-re same basis
				Lernon oil, Argentina Brazi
				Calif., USP, dms Italian Lemongrass of, Indian,
	<b>5 1</b>			Guatemalan, dms di-Leucine, dms., 1 kilo
	Kaolin, water washed, fully calcined,			Licorice root, whole, bit gran , bis powd., bis
	bags c.l., (.o.b. Georgia ton NF pwd., colloidal, bacteria con-	255.00	-	Ugnosuifonate (ase ui
	trolled, 50 fb. baga., 5,000 fb. lotsb. Kaolin, uncalcined No. 1 coating, bulk,	.24	_	Lime, chemical, pebi bulk, 50,000 ib
	C.L. f.o.b., Georgia ton. No. 2 coating ton.	94.00 75.00	-	plants Lima, chemical, hydrai basis
	No. 3 coatington	73.00 70.00	-	Dgs., same baal Lime, NF, purif., 100-to
	filler, gen, i purpose, same ba- siston detaminated water washed, uncal-	68.00	-	Lime oil, dist., Mexican Haitlan, dist., dms. expressed, dms.
	cined paint grade 1 micron	182.00	_	Lime salts (see Calciun d-Limonene, dms
	dry-gro. airikoated soft, same ba-	60.00	_	Linatool ex bols de rose syn., 98-100% dma.
•	Karaya gum, No. 1, powd., bbls lb. No. 2, powd., bbls	2.25 1.95		Linalyi acetale ex bola 92%, dms.
		.52	` .67 	syn. 96-100%, dms., Linalyl benzoate, syn.,
				Linelyl cinnamate, dms. Linelyl formate, syn., 5
_	]			Linalyi iBobutyrate,
				Lindane, 20% form divd 99.9% tech
	Lacquez diluent petroleum, 140F			Linalyi propionate.
	200F. b.r., t.c., New Jersey and New York gal Houston, Texas	1.25	-	uma Linden flowers, with le
	Lecquer diluent, petroleum 200F.	· · · · ·	-	without leaves, bi Linseed meal (see Oils, i Linseed oil, (see Oils, i
	YOR and New Jersey gai	1.20	1.25	Linseed Off fatty acid, (
	Lactic acid, tood grade 86%, t.c., 1.0.b works	1.04	٠_	works
	Laciose, edible, reg. bos., c.l.	1.03		Lithium bromide, an lots, divd soin., same basis.
	Laciose, USP, reg. dats., c.l., tl., fri	22	.28	Unium carbonate, p
	Lectose, USP, spray dried, hos +1	55	.89	divd
P	ORTER November		-	Lithum fluoride, dins.
	multiple			,

A PAR Liber (14		<del></del>	1 lthiumhudden of 11 days an one		
Lake C, red toner, (red 53) bbls., frt.	5.70	- }	Lithlumhydrida, c.l., t.l., divd. 10,000 or morelb.	23.50	
Lanolin, anhyd., cosmetic. 400-io.	1.18	1.25	dms., c.i., t.i., dwd	1.93	•
pharmaceutical, 400-lb. dms. works	1.15	- }	Lithium metal, 1,000-b, lots or more	1.07	:
tech., (under 2% 1.1.a.), 400-lb. dms., works lb.	1.08	113	Lithium nitrate, tech., dms. 100.b	22.70	-
Lard (See Oils, Fets & Waxes market rep		]	Lithium stearate, bos. c.f. for all lib	3.25	-
Lard oil, No. 1, dms., c.l., f.o.b lb. tanks, same basis lb.	.28	į	Lithium sulfate, anhydrous, t.l. dvd, lb. Lithol red toner, barium, dme., frt.	1.01 3,09	:
Lard oil, extra, winter-strained, dms., c.l	.41	-	alid	3.27	_
tanks, same basis	.33	- 1	Lithol rubine toner (red 57), reginated	3.50	-
sis Chicago	.43	- [	dms., frt. alid b. Litsea cubeba oli, dms b.	5.60 2.50	:
ais	.35 Texas, 2c.,	and West	Locust bean gum, powd., bgs. b. 2,4-Lutidine, dms., t.l., fri. equald. kilo	6.00 5.75	1.75
Coest, 3c. higher. Laurel leaves, Turkish	3.00	3.10	Lycopodium, 50-lb. dmslb. 1-Lysine monohydrochloride, feed	8.00	10.00
Laurent's scid, drums, f.o.b ib.	3.86 .65	.71	grade, 10,000 lbs. dlvdlb.	1.35	1.40
Lauric acid, comi., pure bgs., c.i ib. Lauric aldehyde (aldehyde C-12).					
dmaib. n-Lauryi methacrylate, dms., c.l., t.l.,	7.76	_			
worksib. Levendin oii, Abrialis, 30-32%, dms. lb.	1.72 6.50				
Layender flowers, ord lb. medium, bis	.65 .80	.75 .90		_	
select, bis	1.10	1.19	Mace, East Indian, siftings, ib.	4.95	5.00
40-42%, ester, cns lb.	9.00 13.00	13.00 14.00	Slauw #2ib. Magnesia, tech., light, neoprene-	5.60	6.76
apike, Spanish, dma		14,00	grade, bgs., c.l., t.l., works lb. Magnesia, syn., tech., chemical-	-75	A1
dms., works lb. tech., (take, t.l., 400%, dms.,	.46	- i	grade, bulk, c.l., t.L workston	390 00	
worksib. Lead blue, basic, sulfate, bbls., c.i.,	.37	-	baga, c.l., t.l., same basis ton	330.00 365.00	-
ship,t.pt., f.o.b fb. Lead carbonate. (see Lead white basic c	.87 erbonete).	-	deadburned, bulk, same ba-	392.00	
Lead chloride, 400-lb. dms., works. lb.	3.25	-	bgs., same basiston Magnesia.nattech., heavy, 65%, 150	409.00	•
Lead dloxida, tech., powd., 200-lb.	.66	.70	mesh, bulk, c.l., t.l., f.o.b. Nev. ton	232.00	
Lead fluoborate, Iq. conc., dms., t.1., works, irt. equald	.65	-	90%, 325 mesh, same basis ton Magnesium bromide, 80-lb. dms., hex-	265.00	•
Lead metal, divd	.28	-	ehydrateb.	2.50	-
f.o.b. works	.36'∕2 .37∨2	-	Magnesium carbonate, light, tech., bgs., c.i., t.i., works, frt.		
Lead naphthenale iig., 24% Pb. dms.,	1.11	_	equaldib. USP, lite bgs., c.l., same bosisib.	.73 .74	.78 .80
frt. alid ib. Lead nitrate tech , cryst., 400-lb. dms.,		-	USP, heavy, bgs., c.l., same basis b. Magnesium chloride, anhyd., 92%,	.83	•
t.i., works ib. Lead peroxide (see Lead dioxide).	.32\2	-	fiake or pebble dms., c.l., works,	.1234	.15
Lead red, 95% Pb <sub>3</sub> O <sub>4</sub> , or less, bgs. c.l., works	.38	3815	Magnesium chloride, hydraus, 99%, flake, bgs., c.l., works lb.	.14%	
Lead red, 97% Pb <sub>3</sub> O <sub>4</sub> , bgs. c.f., works	3812	.39	Magnesium gluconate, 100-lb, dms	4.25	
Lead, red, 96% Pb <sub>3</sub> O <sub>4</sub> , bgs., c.l., same basis	.391/2	_	Magnesium hydroxide, NF, powd.	4.20	•
Lead silicate (see Lead, white, basic silic Lead silicochromate, bgs., c.l.,	ate).	_	dms., c.l., t.l., works frt. equaldb.	.78	-
workslb.	.35		Magnesium lauryi sulfate, tanks, 1.0 b. works	.22	26
Lead Sulfate (see Lead, blue, basic sulfate)	ILETTO BING LE	BAO, WINE,	Magnesium metal, 99.8%, ingots, 10,000-lb. lots or more. f.o.b.		
Lead, white, basic carbonate, bgs., c.l., frt. aldlb.	1.30	1.40	Freeport, Tex ib. die casting alloys ib.	1.53 1.29	1.33
Lead, white, basic, silicate, bgs., c.i., same basis	.87	_	Magnesium nitrate, tech., flake. 250- b. dms., t.l., works b.	.32	
Lead, white, basic suitate, bgs., c.l., same basis	.85	_	Magnesium oxide, USP, light, bgs., c.l.,	1.65	
Lecithin, edible, tech., bleached, non- ret. dms., l.c.l., works lb.	.36	_	works, frt. equald ib. heavy, dma., c.l., same basis ib.	1.54	•
unbleached non-ret. dms., i.c.i.,		-	Magnesium oxide, tech. (see Magnesia Magnesium phosphate, tribasic, tech.		
same basis	.34	-	80-ib. bgs., i.o.b ib. Magnesium silicate (see Talc).	1.00	•
dms., t.l., workslb. unbleached, non-ret., dms., t.l.,	.28	-	Magnesium silicofluoride, bgs., c.l., t.l. works	.1645	.18
same basis ib. Lemon oil, Argentina kilo	.26 15.00	-	Magnesium stearate, bulk, t.l ib. Magnesium sulfate 10% Mg. (epsom	.95	1.06
Brazii	9.00 8.50	9.50	salts), tech. bgs., t.l.,	.14	
Italianib. Lemongrass oli, Indian, dmskilo	12.50 11.25	-	worksb. bulk, same basisb.	.13 .131/2	:
Guatemalan, dmslb. di-Leucine, dms., 1 kilo workskilo	2.25	-	USP, cryst., bgs., same basis . b. USP, cryst., bulk, same basis . b.	141/2	-
Licorice root, whole, bis	60.00 .40	90.00 .50	Magnesium suitate, 17% Mg. (syn- thetic monohydrate), tech.		_
gran, bis	.70 .95	.90	bgs. t.i., works	.80 1.25	:
Ugnosuffonate (see under Ammonium fonate).	or Sodium	n lignin sui-	Megnesium sullate, annyorous, Gr	1.75	-
Lime, chemical, pebble (quicklime), bulk, 50,000 lbs., works, f.o.b.			bgs., t.l., works	,45	-
plantston Lime, chemical, hydrated, bulk, same	39.00	45.00	bgs., t.l., works ib. Magnosium trisificate, USP, powd., fib.	.38	
bassame basiston	46.00 54.00	50.00	LISP, micronized powd., dms.,	.83	
Lime oll, dist., Mexican, dms ib.	54.00 .69	57.00 ~	Moleculer tech. data. Li. works. Ib.	1.62	•
Havtian, dist., dms	6.60 6.50	=	Maiele acid, cryst., powd., drums, for	3.20	:
expressed, dms	17.50	-	Majela gabudida, bas., t.i., works, fri.	2.80	,50
d-Limonene, drns	.70 6.36	. <b>8</b> 5 	equaldlb.	.65 .63	-
Linalool oxide, syn., 56-gal, dm ib.	2.93 7.75	=	Make acid print and 1000 dispess of	.81	BI
P2% dma.	18.00	24.00	b. bgs., t.l., c.l., dwd. b. Mandarin oil, Brazilian, dms b.	17.75	
syn. 98-100%, dms., f.o.b. works.  b. Linelyl benzoste, syn., 55-gat. dms.  b.	3.10	21.00	Mandelic acid, dms., 1,000 kild		10.00
"   Lingly: Cinnamate, Syn., 65-0al,	00.8	-	Manganese acetate, dinyulate, talib.	.43W .48	-
Unalyl formate, syn., 55-gal, does it.	59.85 7.75	8.50	tetranycrate, crite., t.l., tayo.	1.68	
Linalyi isobutyrate, syn., 56-gai.	6.50	6.55	Manganese corrite, tech., chemica		
divd	19 10	_	in love or more, works, ib.	1.05	•
"   1 '' ''   1 '' '   1 '' '   1 '' '   1 '' '		_	Manganese chloride, amyd., b.	61	•
dma syn., 55-gal.	7 00	_	Manganese dioxide, nat., 7100-fb, bgs.,	in no	٠.
Without leaves bla	.78	.65	I. works.	250.00	380.00
LINDOU MESI (588 Cite Fale & Woyce .	markat .a.a.	1.15 xt).	84% MnOs, same basis ton Manganese dioxide, syn., cryst., bal-		
Linaged of fatty acid, clist clma	arket report	) .67	Manganee dloxide, syn, cryst, bal- tery grade, 90%-92% MnOs 100-b bgs., c.l., works	70	, # ! #!
Litherge. com.). powd. has c.	.53	.62	Citation, lening # 10	1	*
Lithium bromide, anhyd, dms. ton	.34%	2 .40	Manganese glucoriate, works, b	3.00	*
Soln. Same hasis	6,27	· . <u>-</u>	Manganese hydrate dms. dwd	10.00	r
t.l. dwd. bgs., c.l.		-	Manganese hypothics and the last of the la	6414	
divd annyd., c.l., t.l.	9 90	. <del>.</del> .	chip, bulk, c.l., works.	3130	pa, i
soin., dms., c.i., Li., divd		· [	dms., c.l., works		er.
was miles the city OIVO.   )	4,90		Manganesa naprimenade, 44 17 16 16 16 16 16 16 16 16 16 16 16 16 16	-X (1)	ر د در ن الارد و
4 4 2 3 March 20 To 2 4 4 1 1 1 1					Appl 10

		-				
l., t.l., divd. 10,000 or	23.50	-	Manganese reginate, fused, 31/2% Mrs.	.3414	_	
de, monohydrate, t.l., dvdb	1.93	•	CHR. WAY A for elected (R).	.42	-	
no, c.i., t.i., works.lb. 100-lb. lots or more,	1.07	:	pacip 6%-7% National fertilizer grade, lunganese sulfate, fertilizer grade, nun-of-pile, 76%-78% Min6O <sub>4</sub> , 25 kilo bgs., 50-ton cars, divd.			
ech., dms., 100-lb.	22.70	- [	E of Miss	280.00 245.00	-	
oga., c.i., irt. gild. , ib. hydrous, t.i. divd. ih	3.25 1.01 3.09	:	Hardenese sulfate, 2079 mil. grand	330.00	-	
. Derium, dme., frt.	3.27		Mangarèse tellete, ikq., 6% M.a., dime., ir. elid	.60	-	
., same basis, lb. r (red 57), resinated, alld	3.50	- }	WORS	3.02 .88	.89	
dmsb. powd., bgsb.	5.60 2.50 6.00		Egypten	.61 Jeles	.82	į
., t.l., fri. equaid. kilo b. dmab.	5.75	0.75	USI (see 2-Mercaptobenzothazy) clauf UDI (see Diphenyimethane 4,4,-dl-Isoc Manine, bgs., c.l., t.l., 40,000-lb.	yanate)		
ydrochloride, feed ),000 lbs. divd lb.	1.35	1.40	mn, 1.0.0. works	.511 <u>4</u> .50	.59¼ .68	
		_	verine-formeldehyde resin, g.p., t.l. fit.eld formeldehyde resin, g.p., t.l.	.55	.60	ı
		ı	in the state of th	.461/2	-	i
		•	ignitic Coast	.12 .13	=	Ī
, siftings, lb.	4.95	6.00	Henrol rel USP, Brazilan large and regular crystals, spot. cs., but	6.50	6.75	1
. light, neoprene-	5.60	6.76	sm. USP, racemic, 100-450 lbs. lb. 2 Verceoberzothiazole, bgs., t.l.,	9.00	-	
Ja., c.l., t.l., works lb. , tech., chemical- bulk, c.l., t.L	.75	.A1	works, irt. alid	1.25 1.33	1.55 1.66	
lon	330.00 365.00	: 1	Hercufo diforde NF, gran., powd., 100-b. dma., i.o.b. works., ib.	6.60	-	
d, bulk, same ba-	392.00	. \$	Vercunic oxida, redi, purifi., 100-lib. dina., f.o.b. wronka	7.00	7.25	ł
asiston och , heavy, 65%, 150 oulk, c.l., t.l., f.o.b.	409.00	•	tech.,100-lb. dms., same ba- sis	5.50	7.00	
esh, same basiston	232.00 265.00	:	igh, 100-ib. dma., same ba-	7.00	7.25	
ilde, 80-lb. dms., hex-	2.50	-	#sib. Vercurus chiorida (see Calornel).	5.50 tata USP YS	7.50 A	
bonate, light, tech., I., t.I., works, frt.	.73	.76	Mercury, ammonisted (see White precipit Mestyloide, tanks, divd	.46		Į
c.i., same bosis lb. . c.i., same basis lb.	.74 .83	.00	ti., frt. equald	.87 .78	-	
oride, anhyd., 92%, r pebble dms., c.j.,		. ]	d. Wethampheternine hydrochloride, draib. d-Wethampheternine hydrochloride,	12.00	16.00	١
ride, hydrous, 98%, s., c.l., worksib.	.1234	.15	Walhanol, syn., barges, 1.o.b.	4.50	7.00	ļ
conate, 100-lb, dms. orks, E,b.	4.25	. /	producing point, Guif coemgal. Unteramne (see Hexamethyten etetram	.28	-	l
iroxide, NF, powd., :.l., t.l., works irt.	70	. }	Weltowns hydroxyanalogue, dry, 85% activity i.l., frt, 48d (b.	.68	_	1
i sulfate, tanks, f.o.b.	.78 .22	26'1	Equid, 88% activity, t.l. frt. 85. fb. d-Vatkrins(see Racemethionine)	.88	_	١
ital, 99.8%, ingots, b. lots or more, i.c.b.			waters on a seriable powder,	2.05	_	l
t, Tex	1.53 1.29	1.33	det	9.40	_	
ite, tech., flake. 250- , t.l., works b. e, USP, light, bgs., c.l.	.32	- 1	New Abitus, hydrogenated, non- nt day, i.c.l., same ba- is. Ib.	10.00		١
rt. equald lb. .l., same basis ib.	1.65 1.54	:	TIME STATE OF THE	10.00 .85	-	ł
e, tech. (see Magnesia) sphate, tribasic, tech.	1.00	.	Ustracoholisso Mathemas	66.00	-	l
gs., f.o.b	1.00		Verynemy scohol, taska, divdib. Verynemy ketone, ties, divdib. Veryn anthranilate, tech., dma.,	.55 .547 <sub>2</sub>	=	Ì
rate, bulk, t.l lb.	.1645 .95	.1800 1.06	Whitemoste date	1.41 .25	2.65	ł
ate 10% Mg. (epsom tech. bgs., t.l.,	.14	.	be min its alle	1.85	-	ļ
. ib. b. bgs., same basis . ib.	.13 .1314	: }	400 through 4 000 cars) 50 lb.	.5644	-	l
bulk, same basis . то. fate, 17% Mg. (syn- попонуdrate), tech.	.14%	-	beg. 1. cl., 30,000 fb., min., drd. zone 1	2.73	-	ĺ
WORKS	.80 1. <b>25</b>	:	15 cps) 60 lb. bags, tl., cl.	206		1
asia	1.75	-	4,000 cps) 60 lb. bos. II. cl	2.85	-	
ate trinyurate, tech.,	.45	-	30,000 lbs., clivd., 200e 1. lb. lschooldose (visc. 15 to 25 cps) 50 b. bags. tt., cl., 30,000 lb. wish, clickd., 200e 1 lb.	2.24	-	l
icate, USP, powd., fib. 000-lb. lots b. onized powd., dma.,	.38	1		2.52	-	1
dms. Li. workslb.	.83 1.62	:	Hattichiorolom (see 1,1,1-Trichioroett	.22 18118).	.26	ļ
st., powd., arums, 100 s is	3.20 2.80	:	Herolathylkatone, lanks, divd. E. Ib.	4.65 6.00 .235	=	
s, f.o.b	.65	,sa	formale, pure, non-ret, dins.	3.55	3.80	١
and food grades, 50-	.63 .81	<u>a</u>	to be basis	.41 .29	=	1
, i.i., c.i., divd b. azilian, dms b. i., dms., 1,000 kilo	17.75	10.00	ten/hepianore, pure, driss. ib.	.31 14.50 7.30	=	1
tate dividrate dms.	8.00 4311	.48	Webster Complete Com Mothers	45.00 (raben)	_	
done til divd b.	48 1 68	1.80 29	tanks, divd.	riqq	9.40	1
ate, tech., dmslb. ate, tech., dmslb.	80	-	anyl street or tanks, divd. to	alcohol). .35	~	1
armore worksb.	1.05		E Manufacture Cont.	.38	-	
Joride, emiya, cino. Ib. lota or more lb.	61		Value Vate tanks ched	.41 6.60 .62	10.40	1
8% MinOg, 100-10. Opin	200.00 250.00	380.00	VOP. 600 Magnes	14.00	_	1
, same bass. orde, syn., cryst., bal-		AT to	riparation tech area kilo	10.14 9.70	=	l
DOS., D.L., WURTER DA		er e		1.65	_	1
errite grade, salle, ib, uconate, FCC grade, drus, f.o.b works, ib,	3.60	<b>. 38</b>	olari tanks, f.o.b.	3.60 1.32	5.40	1
Tale office AP drie.	A 16			1.40	7	1
	4414	Orași III	tone chorde, USP, 1-lb. tone Chorde, USP, 1-lb. tone Li, fit and tone tone tone tone tone tone tone tone	5.80	_	
rks.	49		L. fit. aid. 1000-lb. drns. 10. drns	1.79 ide).	1.94	
Inthenate, 44 y	14. 14. 5 1-1. 14. 15. 15. 15. 15. 15. 15. 15. 15. 15. 15	10 m 11 m	-vi nockies, (b).	3.25	<b>-</b> : :	١

414 -	Methyl violet toner, tungstated, PYA, bblssame basisb. 4.70 5,20	Naphthol arylide red toner deep
-	aminodiphenyi methana)	light shades, bhis
_	purif., flake, seme basis 6 0.05	1-Nachthol-5-sulfonic acid, disodium sait (see
} -	Methylene di-p-phenylene di-Isocyanate (see diphenylmethane 4,4,-di-Isocyanate).	Naphthytemine sulfonic mixed acid (see S acid).
	Methylene chloride, tanka, 4,000 gal.	Works In 240
) -	Moulding and the Havy and Anne Medical Moulding and the M	2-Nephthylamine-4.8 disultante acid (see Laurent's a
2 -	Methylphenylpryazolone (see 1- Phenyl-3-methyl-pyrazolone- 5).	2-Naphthylamine-1-sulfonic acid (see Tobias acid Neatafoot oil, 20°F, t.l., f.o.b. works
89 S	a-Methylsiyrene, f.o.b. shipping pt., ib	1 deple 6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
	Memylthionine chicitide (see Methylane blue).  Mica, dry-grd., joint cement, plastic, 50	30°F, L.I., f.O.D. Works
	lb., bgs., c.l., works b07½ - dry-grd., roofing, 20 to 80 mesh.	tanks, f.o.b. works lb
1/2 .59%	works	tanks, f.o.b. works
58	I 008., C.L. f.o.b. works in 1835	I Privaceipnia, Pa.; other areas, 1 v.c. high I higher and West Coast 3c, higher
5 .60 (	rubber, bgs., c.l., f.o.b. works b. 163, walpaper, bgs., c.l., f.o.b. works. b. 22	dms., 50-kijo, jots, activity ba-
3/2 -	Microcrystalline wax, petroleum, coat- ing grades, FDA, tanks,	Naopentyl givcol, skurry, 90%, . c l. t.i
-	Works	powder, fieke, box 1.1 glyd 1b 50
	works	Nerol, tech., dms
6.75	tanks, refy	Neroli oli, Tunisian, bota kilo 2,700.00
1.55	80-90 yrs., tanks, raty	Neroun, Bromeon kilo 7.22
1.88	( USP 180-190 VIB., tenks, refv asl. 2.64	Niscinamide, USP, t.l. dms k8o. 8.00 Niscin NF, dms., 5,000 kilos or more,
1.00	200-210 vis., tanks, refygal. 2,56 — 340-350 vis., tanks, refygal. 2,65 —	divd. 7.50 leed-grade, 98-99.5%, bgs., same
7.0-	Mineral spirits, petroleum, odoriesa, tanks, New Jersey	Nickel acetale, dms., 5,000-lbs, to t.i.
7.25	Houston, Tex	Nickel carbonate, drns., bgs., 5,000-
7.00	tanks, New Jerseygal. 1,41 1,49 Houston, Texgal. 1,41 1,43	bs. to t.l., dvd. E b. 3.45 Nickel chloride, bgs., 10,000-bs. to t.l.,
7.25	Molybdate crange, bbls	divd. E
7.50	89.6%, dms., works lb. 13.50 – Molybdenum trioxide, CP, dms	Nickel metal, electro cathodea, cs.,
PXV)	works, 24,000 lbs. or more lb. 5.25 -	Worksb. 3.46
_ {	tech., chemical, dris., 24,000 lbs. or more, basis, b. 2.65 2.85	Nickel nitrate, dms., bgs., t.l., divd. Eb. 1.18
	tech. metallurgical, dms. same basis.b. 2.65 2.85 Molybdic acid (See Ammonium Dimolybdate)	Nickel oxide, 75%-78% Ni, dms. 500- lb. lots, f.o.b. works lb. 2.60
16.00	Monoammonium phosphate, fert. grade, min. 13% N. 52% P.	Nickel suifate, bgs., t.l., divd. E lb. 80 Nicotinic acid (see Niscin).
7.00	bulk, c.l., f.o.b. Fla. workston 155.00	Nicotinamide (see Niacinamide). Nitric acid. 36° Be., 38°Be. 40°Be.
	Monoammonium phosphate, tech., bgs., c.l., t.l., works, frt.	42°Be. tanks, c i., works NF, 100% basis ton 195.00
- {	equald 100 lbs. 54.00	941/2% to 98% HNO <sub>3</sub> , tanks, works, 100% basis ton 280.00
}	food grade, bgs., c.l., t.l., same be- sls	o-Nitroantine, flake, dms., t.i.
_ }	Mono-tert-butyl-m-cresof, bulk, t.i. lb. 1.89 Monobutylamine, bulk, divdlb. 96 1.00	works
	Monochloroacetic acid, purif. (see Chloroacetic acid, mono). Monochlorobenzene, tanks, f.o.b ib	o-Nitroaniline, orange toner, bgs., frt.
- }	Monosihanolamine, tanks, frt. alid. E	p-Nitroaniline, dms., c.i., t.i., 30,000 lb.
- [	Monoethylamine, 70% aqueous tanks, frt. prepaid, 100% basis lb	min., works ib. 1.8; o-Nitrosnisole, 100-kilo lots kilo 8.7(
_	anhyd., tanks, same basis lb	Nitrobenzene, tanka, f.o.b lb
	alid. E	f.o.b
	Monoleopropylamine, anhyd., dms.,	2-Nitro-p-cresol, tech., dms., t.l., frt. alid
<u>.</u> - \	c.l., frt. prepaid b	Nitroethane, tanks, divd. E
" -	Monomethylamine, anhyd., tanke, con- tained basis frt. equald ib	over 32% N, and right type, worksunit-ton. 1.20
2.65	25% soin., tanks, fri. alid., 100% basisb57 –	direct application, 19-32% Nunit-ton. 1.26
- [	40-60% soin., tanks, frt. squald. 100% basis	Mitrogenous sewage sludge, proc-
*4 - <u>[</u>	Monopolassium glutamate, dms., 990 lb. or more, frt. alid ib. 2.50 -	Chicago unit ton. 4.10 NOTE: Price is per unit NH, plus \$1, per unit a c
	Monosodium glutamete, 50-lb. bgs. c.l., t.l., divdb76 .80	producer,s works, Chicago. Nitrogenous tankage, processed, bulk,
- ]	100-lb. drums, c.l., t.t., dlvd lb	per unit-ton NH <sub>3</sub> , f.o.b. Carrol- iville, Wisc unit ton 7.00
_ \	Monosodium phosphate (see Sodiumphosphate, monobasio). Montan wax, crude, imp., German . ib55 .57	1.0.b. Fordes, Me
	dom., Calif., bgs., c.l., t.l., f.o.b. shipt. pt	expanded, bulk, c.l., per unit-ton N, f.o.b. Forrestdale, R.I. unit ton 8.35
- ì	rafd., dom. Calif., same basis ib. Morphine alkaloid, NF, 25 k lote kilo 1018.00 - Morphine sulfate, USP, 25 k lote kilo 850.00 -	Nitromethens, dms., t.l., divd. Eib. 2.37 o-Nitrophenol, dms., f.o.b. worksib. 1.00
!	Morpholine, dms., c.i., trt. alid. E lb. 1.02 -	p-Nitrophenol, dras., c.t., f.o.b. works
	tanks, irt. alid., Eb94 ~ Muriatic acid (see Hydrochioric acid).	2-Nitropropene, tanks, frt. ald. E ib
.26	Musk, syn., ambrette, 25-b. cnsb. 6.00 7.00 Musk, syn., ketone, dmsb. 10.75 –	o-Nitrotoluana, dms., c.l., f.o.bfb65 tanka, same basia
_	Musk, syn., xylol, dms,	p-Nitrotoluene, tech. dms., c.l., works
3.80	Mustard seed, Brown No. 1 lb	tanks, works
_	Oriental No. 1 bgs	lea, min. frt. alid ib
<u> </u>	Myristicacki, comi., pure, t.l., bgslb. 1.30 — tanks	drochloride) Nutmeg oil, diet., East Indien, NF.
<u> </u>	Myristica oil (see Nutmeg oil).	Nutmega, East Indian, whole
-	Myrrh gum, 6gs b. 2,25 -	
9.40		
, -		
" <u>~</u>	·	•
- i		STATES OF THE PARTY OF THE PART
10.40	Naphthe, high solvency (see Solvent naphthe, petroleum). Naphthe, petroleum, cleaners (see Cleaner's naphthe).	Ochre (see Iron oxide, yellow, nat.) Ocotes cymbarum oli dms kilo 5.15
~ [	Naphtha, VM&P, petroleum, tanks,	Ocotea cymbarum oli dma, kilo 5.15 Ocotea, Chinese 90% kilo 5.25 1-Ootedecanol, syn., tanks, f.o.b. ib. 43
-	New Jarsey and New York-	I-Octanol, syn., tanks, f.o.b
<u> </u>	Naphihalana, crude, dom., 78°, 120ks,	Houston, Tex
_	Naphthalene, phthalic anhydride	004 1.40
5.40	Nachthalana, patroleum, 80°C.	n-Octyl, n-decyl phthalate, tanks, divd
<u>-</u> 1	Nachthelene rafd. balls flakes whole	tert-Octylemine, dms., c.l., t.l., works. 2.60 Octylemiol, molten, t.c.,
_ }	salara, Jobbers, dms., works	Works
1.94	Naphthenic acid, crude, bulk, works lb. 30 43 refined, 220 acid, same basis ib. 80 90	tents Oleic sold, dist., (white), drie b. 46
1.07	e-Naphthol, ground, dms.; t.l. dtvd fb. 1.81	Works 15. 76 Officia oil, Fd, drns 15. 40 tantes 32 Officia oild, dist., (white), drns 15. 48 tantes 15. 38 Officia oild, s.d. (red) drns 15. 38 tantes 15. 38
1	b-Naphthol, fech. flake, 80 lb. bgs.; c.l., works.	
		November 17, 1986
		The state of the s

Naphthol arylide red toner deep shades, bblsib.	13.40	15.45	ÍΓ
		13.00 sait).	11
Nachthylamina sulfonic miyad acid (see :	3 acid). Xeve's ack	i).	Н
Worksib.	2.10	<b>-</b>	H
2-Naphinylemine-1-e distriction and tree To	Case-II	ry. ckd).	
dms in	.52	_	H
tanks, i.o.b. works	.52	-	L
tanks, f.o.b. works lb.	.48 30	.49	o
higher and West Court 20 bloke	lac hinkar	le radius of Texas, 2c.	0
dms., 50-kito, lots, schivity he-	π.		۱,
sis, divdkilo. Neopentyl glycol, slurry, 90%c.l., t.l.	75.00	-	٥
I DOWOUT, TRUKE, COS., t.I., dlwd ih	.598	- 6 76	
Neroli oil, Tunisian, botakio 2	A RA	5.00	ĺ
Nerolin, Bromein	7.05 7. <u>22</u>	-	_
NECIN NF, dms., 5,000 kilos or more,		_	8
1890-grade, 98-99.5%, bgs., same basiskilo.	5.10	5.50	۱,
Civo. E.,	1.82	-	١°
l los. to t.l., divd. E.,	3.45	-	١,
Nickel fluoborate, fig. conc., dms., t.l.,	1.19	-	ğ
Nickel metal, electro cathodea, cs.,	1.25	-	٥
i Nickei niirate, ams., bas., til. diva		-	٥
I ID. IOI8. 1.O.D. WORKS Ib.	2.60	-	;
Nicotinic acid (see Niecin).	.80	.90	П
Nitric acid. 36° Be., 36°Be, 40°Be, 42°Be, tanks, c.i., works NF.			H
100% basis ton 941/2% to 98% HNO <sub>3</sub> , tanks, works.	195.00	-	
o-Nitrogniline, flake, dms., t.l. works	1.51	_	
molten, tech., works	1.44 1.37	-	١
alid	1.90	-	[
o-Nitroanisole, 100-kilo lots, kilo	1.63 8.75	-	;
( 0-Nitrochlorobenzene, dms., t.i., c.i.,		.34	1
2-Nitro-p-cresol, tech., dms., t.i., frt,	.74	-	ا ا
Nitroethane, tanks, divd. E	2.50	-	
over 32% N, and mgf. type, worksunit-ton.	1.20	-	
Nunit-ton.	1.26	1.46	l
ested, bulk, f.o.b. Chicagounit ton.	4.10		þ
I NOIC: FIICE IS DEFUILL MAS DIUS SI, DEI	LUW 4.0.8	DUIK, 1.0.D.	1
Nitrogenous tankage, processed, bulk,			P
oer unit-ton NH <sub>3</sub> , f.o.b. Carrol- iville, Wiscunit ton	7.00	-	
ntrogenous tankage, processed, bulk, per unit-ton NH <sub>3</sub> , f.o.b. Carrol- lville, Wiscunit ton 1.o.b. Forbes, Meunit ton expended, bulk, c.l., per unit-ton N,	7.00 6.76 8.35	<u>-</u>	PPP
Nitrogenous tankage, processed, bulk, per unit-ton NH <sub>3</sub> , f.o.b. Carrol-wille, Wisc unit ton 1.o.b. Forbes, Me	7.00 6.76	: :	PPP
Nitrogenous tankage, processed, bulk, per unit-ton NH <sub>3</sub> , f.o.b. Carrol- Nile, Wisc unit ton  f.o.b. Forbee, Me unit ton  expended, bulk, c.l., per unit-ton N,  f.o.b. Forbestdale, R.l., unit ton  Nitromethene, drus., f.l., clivd. E lb.  p-Nitrophenol, drus., f.o.b. worke lb.  p-Nitrophenol, drus., c.l., f.o.b.	7.00 6.76 8.35 2.37	- - - - 1,45	
Nitrogenous tankage, processed, bulk, per unit-ton NH <sub>3</sub> , f.o.b. Carrol- ville, Wisc	7.00 8.75 8.35 2.37 1.00 1.06 .55 1.15	1,45	2 P P P P
Mitrogenous tankage, processed, bulk, per unit-ton NH <sub>3</sub> , f.o.b. Carrol-wille, Wisc unit ton 1.o.b. Forbee, Me unit ton expended, bulk, c.l., per unit-ton N, f.o.b. Forbestdale, R.I., unit ton Nitromethane, dms., t.l., clivd. E lb. o-Nitrophenol, dms., f.o.b. works lb. p-Nitrophenol, dms., c.l., f.o.b. works lb. 2-Nitrophenol, dms., c.l., f.o.b. m-Nitrotoluene, tosh, dms., frt. ald. E., lb. o-Nitrotoluene, tosh, dms., c.l., f.o.b fb. p-Nitrotoluene, tosh, dms., c.l., f.o.b fb. p-Nitrotoluene, tosh, dms., c.l., f.o.b fb. p-Nitrotoluene, tosh, dms., c.l., f.o.b fb.	7.00 8.75 8.35 2.37 1.00 1.06 .86 1.16	: :	
Mitrogenous tankage, processed, bulk, per unit-ton NH <sub>3</sub> , 1.0.b. Carrol- ville, Wisc unit ton 1.0.b. Forbee, Me unit ton expended, bulk, c.l., per unit-ton N, 1.0.b. Forbestidis, R.I., unit ton Nitromethane, dms., t.l., clivd. E lb. o-Nitrophenol, dms., t.0.b. works lb. p-Nitrophenol, dms., c.l., f.o.b. works lb. 2-Nitrophenol, dms., c.l., f.o.b. m-Nitrotoluene, tanka, frt. ald. E lb. m-Nitrotoluene, tanka, frt. f. lb. o-Nitrotoluene, tanka, c.l., f.o.b lb. p-Nitrotoluene, tech. dms., c.l., f.o.b lb. p-Nitrotoluene, tech. dms., c.l., sb. p-Nitrotoluene, tech. dms., c.l., lb. Nonylphenol, tanks, t.o.b. E. of Rock-	7.00 6.75 8.35 2.37 1.00 1.06 .85 1.16 .65 .48	1.45 - - - - .57	
Mitrogenous tankage, processed, bulk, per unit-ton NH <sub>3</sub> , 1.o.b. Carrol- Mile, Wisc. unit ton 1.o.b. Forbes, Me. unit ton 1.o.b. Forbes, Me. unit ton expended, bulk, c.l., per unit-ton N, 1.o.b. Forbestdale, R.I., unit ton Nitromethene, daws., Ll., clivd., E b. o-Nitrophenol, dras., 1.o.b. works b. p-Nitrophenol, dras., c.l., 1.o.b. works b. 2-Nitrophenol, dras., c.l., 1.o.b. in-Nitrotoluene, toch., dras., 1.f. alid. b. o-Nitrotoluene, toch., dras., c.l., f.o.b. b. p-Nitrotoluene, toch., dras., c.l., b. Norytphenol, tanks, 1.o.b. E. of Rock- ies, min. frt. alid b. Norephedrine hydrochioride (see Phen drochloride)	7.00 6.75 8.35 2.37 1.00 1.06 .55 1.16 .65 .48 .83	1,45 - - - .57 .85	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
Mitrogenous tankage, processed, bulk, per unit-ton NH <sub>3</sub> , 1.0.b. Carrol- ville, Wisc. unit ton 1.0.b. Forbes, Me. unit ton 1.0.b. Forbes, Me. unit ton 1.0.b. Forbes, Me. unit ton 1.0.b. Forbestdale, R.I. unit ton 1.0.b. Forbestdale, R.I. unit ton 1.0.b. Mitrogenetic, dine., L., divid. E 1.0. Nitrophenol, dine., a.L., f.o.b. works. lb. 2-Nitrophenol, dine., a.L., f.o.b. m-Nitrotoluene, tech., drns., frt. alid. b. o-Nitrotoluene, dine., c.L., f.o.b fb. tanks, same basis bb. p-Nitrotoluene, tech. dine., c.L., works bb. tanks, works bb. tanks, works bb. tanks, works bb. Nonyiphenol, tanks, f.O.b. E. of Rockles, mh. frt. alid bb. Norephadrine hydrochloride (see Phen dirochloride) Nutmep Oil, diet., East Indien, NF, dine dio	7.00 6.76 8.35 2.37 1.00 1.06 .55 1.16 .65 .48 .83 .70 .49 ylpropeno	1,45 - - - .57 .85	
Mitrogenous tankage, processed, bulk, per unit-ton NH <sub>3</sub> , 1.o.b. Carrol- Mile, Wisc. unit ton 1.o.b. Forbee, Me. unit ton expended, bulk, c.l., per unit-ton N, 1.o.b. Forbee, Me. unit ton Nitromethene, daws, t.l., clivd, E b. o-Nitrophenol, drae, f.o.b. works b. p-Nitrophenol, drae, d.l., f.o.b. works b. 2-Nitrophenol, drae, d.l., f.o.b. m-Nitrotoluene, tech., drns., frt. alid. lb. o-Nitrotoluene, drns., c.i., f.o.b. fo. tenks, same basis b. p-Nitrotoluene, tech. drns., c.i., fo. tenks, works fo. tenks fo. tenks, works fo. tenks, t	7.00 6.76 8.35 2.37 1.00 1.06 .85 1.16 .65 .48 .83 .70 .49 yipropano		PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
Mitrogenous tankage, processed, bulk, per unit-ton NH <sub>3</sub> , 1.0.b. Carrol- ville, Wisc. unit ton 1.0.b. Forbes, Me. unit ton 1.0.b. Forbes, Me. unit ton 1.0.b. Forbes, Me. unit ton 1.0.b. Forbestdale, R.I. unit ton 1.0.b. Forbestdale, R.I. unit ton 1.0.b. Mitrogenetic, dine., L., divid. E 1.0. Nitrophenol, dine., a.L., f.o.b. works. lb. 2-Nitrophenol, dine., a.L., f.o.b. m-Nitrotoluene, tech., drns., frt. alid. b. o-Nitrotoluene, dine., c.L., f.o.b fb. tanks, same basis bb. p-Nitrotoluene, tech. dine., c.L., works bb. tanks, works bb. tanks, works bb. tanks, works bb. Nonyiphenol, tanks, f.O.b. E. of Rockles, mh. frt. alid bb. Norephadrine hydrochloride (see Phen dirochloride) Nutmep Oil, diet., East Indien, NF, dine dio	7.00 6.76 8.35 2.37 1.00 1.06 .55 1.16 .65 .48 .83 .70 .49 ylpropeno		PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
Mitrogenous tankage, processed, bulk, per unit-ton NH <sub>3</sub> , 1.0.b. Carrol- ville, Wisc. unit ton 1.0.b. Forbes, Me. unit ton 1.0.b. Forbes, Me. unit ton 1.0.b. Forbes, Me. unit ton 1.0.b. Forbestdale, R.I. unit ton 1.0.b. Forbestdale, R.I. unit ton 1.0.b. Mitrogenetic, dine., L., divid. E 1.0. Nitrophenol, dine., a.L., f.o.b. works. lb. 2-Nitrophenol, dine., a.L., f.o.b. m-Nitrotoluene, tech., drns., frt. alid. b. o-Nitrotoluene, dine., c.L., f.o.b fb. tanks, same basis bb. p-Nitrotoluene, tech. dine., c.L., works bb. tanks, works bb. tanks, works bb. tanks, works bb. Nonyiphenol, tanks, f.O.b. E. of Rockles, mh. frt. alid bb. Norephadrine hydrochloride (see Phen dirochloride) Nutmep Oil, diet., East Indien, NF, dine dio	7.00 6.76 8.35 2.37 1.00 1.06 .55 1.16 .65 .48 .83 .70 .49 ylpropeno		PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
Mitrogenous tankage, processed, bulk, per unit-ton M-1, 1.o.b. Carrol-wille, Wisc. unit ton 1.o.b. Forbes, Me. unit ton expanded, bulk, c.l., per unit-ton N, f.o.b. Forbestdale, R.I. unit ton Nitromethene, dws., Ll., clvd. E lb. o-Nitrophenol, dras., c.b. works lb. works lb. works lb. 2-Nitrophenol, dras., c.l., f.o.b. works lb. 2-Nitrophenol, dras., c.l., f.o.b. m-Nitrotoluene, tech., drns., frt. alid. lb. o-Nitrotoluene, drns., c.l., f.o.b lb. tanks, same besis lb. p-Nitrotoluene, tech. drns., c.l., tworks lb. Nonylphenol, tanks, tworks lb. Nonylphenol, tanks, t.o.b. E. of Rockeles, min. frt. alid lb. Norephedrine hydrochloride (see Phendrochloride) Nutmeg cii, diet., East Indian, NF, drns kilo	7.00 6.76 8.35 2.37 1.00 1.06 .55 1.16 .65 .48 .83 .70 .49 ylpropeno		PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
Mitrogenous tankage, processed, bulk, per unit-ton NH <sub>3</sub> , 1.o.b. Carrol- Ntile, Wisc. unit ton 1.o.b. Forbes, Me. unit ton 1.o.b. Forbes, Me. unit ton expended, bulk, c.l., per unit-ton N, 1.o.b. Forbes, Me. unit ton Nitromethene, dms., t.l., clivd, E b. o-Nitrophenol, dms., t.o.b. works b. p-Nitrophenol, dms., c.l., 1.o.b. works b. 2-Nitrophenol, dms., c.l., 1.o.b. m-Nitrotoluene, tsoh., dms., frt. alid. b. o-Nitrotoluene, tsoh., dms., c.l., f.o.b. tanks, works b. Nonylphenol, tanks, 1.o.b. E. of Rockies, min. frt. alid b. Norephedrine hydrochloride (see Phen drochloride) Nutmeg cli, dist., Esst Indian, NF. dms kilo Nutmegs, East Indian, whole b.	7.00 6.76 8.35 2.37 1.00 1.06 .85 .48 .83 .70 .49 yipropano 32.00 3.16		PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
Mitrogenous tankage, processed, bulk, per unit-ton MH <sub>3</sub> , 1.o.b. Carrol- Mile, Wisc. unit ton 1.o.b. Forbee, Me. unit ton 1.o.b. Forbee, Me. unit ton expended, bulk, c.l., per unit-ton N, 1.o.b. Forbee, Me. unit ton Nitromethene, dms., t.l., clivd, E lb. o-Nitrophenol, dms., t.o.b. works lb. p-Nitrophenol, dms., c.b., t.o.b. works lb. 2-Nitrophenol, dms., c.t., f.o.b. m-Nitrotoluene, tsoh., dms., frt. alid. lb. o-Nitrotoluene, tsoh., dms., frt. alid. lb. o-Nitrotoluene, tsoh., dms., c.t., f.o.b lb. p-Nitrotoluene, tsoh., dms., c.t., f.o.b lb. Norybphenol, tanks, t.o.b. E. of Rockies, works. Norybphenol, tanks, t.o.b. E. of Rockies, min. frt. alid lb. Norephedrine hydrochloride (see Phen drochloride) Nutmeg cli, dist., Esst Indian, NF. dms	7.00 6.76 8.35 2.37 1.00 1.06 .85 .48 .83 .70 .49 yipropano 32.00 3.15	1,45  .57 .85  .53½ lamine hy-	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
Mitrogenous tankage, processed, bulk, per unit-ton NH <sub>3</sub> , f.o.b. Carrol- ville, Wisc. unit ton 1.o.b. Forbes, Me. unit ton 1.o.b. Forbestdale, R.I. unit ton 1.o.b. Mitromethene, dws., L., clvd. E b. 1.o.b. works 6.b. Mitropopene, tanks, frt. ald. b. o-Nitrotoluene, tech., drns., frt. ald. b. Nonylphenol, tanks, Lo.b. E. of Rockeles, mh. frt. ald b. Nonylphenol, tanks, Lo.b. E. of Rockeles, mh. frt. ald b. h. Norephedrine hydrochloride (see Phendrochloride) Nutmeg oil, det., East Indian, NF, drns kilo Nutmegs, East Indian, whole b kilo Cottee, Chinase 90% kilo 1-Ootedecanol, syn., tanks, f.o.b b Lo.chane, 87% min. tanks, f.o.b fb.	7.00 6.76 8.35 2.37 1.00 1.06 .85 1.16 .85 .48 .83 .70 .49 yipropano 32.00 3.15	1,45  .57 .85  .53½ lamine hy-	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
Mitrogenous tankage, processed, bulk, per unit-ton NH <sub>3</sub> , f.o.b. Carrol-wille, Wisc unit ton 1.o.b. Forbes, Me unit ton 1.o.b. Forbes, Me unit ton expanded, bulk, c.l., per unit-ton N, f.o.b. Forbestdale, R.I. unit ton Nitromethene, drus., t.l., clvd. E b. o-Nitrophenol, drus., f.o.b. works b. 2-Nitrophenol, drus., d.l., f.o.b. works b. 2-Nitrophenol, drus., d.l., f.o.b b Nitrotoluene, tsoh., drus., frt. ald. b. o-Nitrotoluene, tsoh., drus., frt. ald. b. o-Nitrotoluene, tsoh., drus., frt. ald. b. o-Nitrotoluene, tsoh., drus., frt. ald. b. b. tanks, same besis b. p.Nitrotoluene, tsoh. drus., c.l., tanks, works b. tanks, works b. tanks, works b b. Norrytohenol, tanks, f.o.b. E. of Rockeles, mh. frt. ald b. lb. Norephadrine hydrochloride (see Phendrochloride) Nutmeg oil, det., East Indian, NF, drus did. Nutmegs, East Indian, whole ib. Cotano, sym., tanks, f.o.b ib Cotano, sym., tanks, f.o.b h Cotano, sym., tanks, f.o.b h Cotano, sym., tanks, f.o.b	7.00 6.76 8.35 2.37 1.00 1.06 .85 1.16 .85 .48 .83 .70 .49 yypropeno 3.16 5.15 5.26 .43y <sub>2</sub> .70 6.25	1.45 	PPP PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
Mitrogenous tankage, nocessed, bulk, per unit-ton NH <sub>3</sub> , f.o.b. Carrol-wille, Wisc. unit ton 1.o.b. Forbee, Me. unit ton expanded, bulk, cl., per unit-ton N, f.o.b. Forbee, Me. unit ton Nitromethene, dws., tl., clwd. Eb. o-Nitrophenol, dms., f.o.b. worksb. p-Nitrophenol, dms., f.o.b. worksb. 2-Nitrophenol, dms., cl., f.o.b. worksb. 2-Nitrophenol, dms., cl., f.o.bb. 18-18-18-18-18-18-18-18-18-18-18-18-18-1	7.00 6.76 8.35 2.37 1.00 1.06 .85 .48 .83 .70 49 yipropano 32.00 3.18 5.15 5.26 .43½ .70 6.25	1,45 	
Nitrogenous tankage, processed, bulk, per unit-ton NH <sub>3</sub> , f.o.b. Carrol- vitile, Wisc unit ton f.o.b. Forbes, Me unit ton expended, bulk, c.l., per unit-ton N, f.o.b. Forbestdale, R.I. unit ton Nitromethene, dms., t.l., divd. E b. o-Nitrophenol, dms., f.o.b. works b. p-Nitrophenol, dms., f.o.b. works b. 2-Nitropopene, tanks, frt. ald. E b. m-Nitrotoluene, tech., dms., frt. ald. b. o-Nitrotoluene, tech., dms., frt. ald. b. o-Nitrotoluene, tech., dms., c.l., f.o.b b. tanks, same basis b. p-Nitrotoluene, tech., dms., c.l., f.o.b b. tanks, works b. Nonylphenol, tanks, f.o.b. E. of Rockles, mh. frt. ald b. Norephedrine hydrochloride (see Phen drochloride) Nutmeg oil, dist., East Indian, NF, dms dio Nutmegos, East Indian, whole b. Loctane, syn., tanks, f.o.b b. Loctane, syn., tanks, f.o.b b. Loctane, syn., tanks, f.o.b b. n-Ootea, chinese 80% kilo 1-Ooteaconol, syn., tanks, f.o.b b. n-Ootea, chinese 90% kilo 1-Ooteaconol, syn., tanks, f.o.b b. cons gsl. Octyl sicohol, perlumer's grade, bots, ons. n-Octyl, n-decyl phthalate, tanks, f.o.b., dryd b. tert-Octylerinine, dms., c.l., f.l., works Octylerinine, dms., c.l., f.l., works	7.00 6.76 8.35 2.37 1.00 1.06 .56 1.15 .65 .48 .83 .70 .49 ylpropeno 32.00 3.15 5.26 .43½ .70 6.25 1.40 .33¼ .70 6.25 1.40 .33¼ .70 .33¼ .70 .33¼ .70 .33¼ .70 .33¼ .70 .70 .70 .70 .70 .70 .70 .70	1.45 	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
Nitrogenous tankage, processed, bulk, per unit-ton NH <sub>3</sub> , 1.o.b. Carrol- vitle, Wisc. unit ton 1.o.b. Forbee, Me. unit ton 1.o.b. Forbee, Me. unit ton expended, bulk, c.l., per unit-ton N, 1.o.b. Forbee, Me. unit ton Nitromethane, dms., t.l., clivd, E	7.00 6.76 8.35 2.37 1.00 1.06 .85 .48 .83 .70 .49 ylpropano 32.00 3.16 5.26 .43 .70 .32 .40 .33V 2.60 .32 .46	1,45 	PPP PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
Nitrogenous tankage, processed, bulk, per unit-ton NH <sub>3</sub> , f.o.b. Carrol-wille, Wisc. unit ton 1.o.b. Forbes, Me. unit ton expanded, bulk, c.l., per unit-ton N, f.o.b. Forbes, Me. unit ton Nitromethene, dws., l.l., clwd. E b. O-Nitrophenol, dms., f.o.b. works b. Phitrophenol, dms., f.o.b. works b. 2-Nitrophenol, dms., c.b. to.b. works b. 2-Nitrophenol, dms., c.l., f.o.b b. 10-Nitrotoluene, tech., dms., frt. ald. b. 15-m. Nitrotoluene, tech., dms., frt. ald. b. 15-m. Nitrotoluene, tech., dms., c.l., f.o.b b. 15-Nitrotoluene, tech., dms., c.l., fo.b b. Nonylphenol, tanks, l.o.b b. Nonylphenol, tanks, l.o.b db. Nonylphenol, tanks, l.o.b db. Nonylphenol, tanks, l.o.b db. Nonylphenol, tanks, l.o.b db. Noteshedrine hydrochloride (see Phendrochloride) Nutmeg cili, dist., East Indian, NF, dms	7.00 6.76 8.35 2.37 1.00 1.06 .85 1.16 .85 .48 .83 .70 .49 yipropano 32.00 3.15 5.15 5.25 .43/2 .70 6.25 1.40 .33/4 .32	1,45 	PPP PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
	I-Naphthol-5-sulfonic acid (see L. acid).  I-Naphthol-5-sulfonic acid (see L. acid).  I-Naphthylamine sulfonic mixed acid (see a. Naphthylamine sulfonic mixed acid (see a. Naphthylamine sulfonic acid (see a. Naphthylamine-5-sulfonic acid (see I. a. Naphthylamine-5-sulfonic acid (see I. a. Naphthylamine-1-sulfonic acid (see		

WEEK ENDING NOV 14, 1986

	Oleum (see Sulfuric acid, furning),		
1	Olibanum gum, tears, bgs lb.	2.10	_
	Olive oil, edible, Spanish, drns gal.	8.00	Ξ
of	Italian B-type gel.	5.40	5.60
2C.	Olivine, crude, workston	12.00	0.00
	20 mesh. works ton	15.00	
	100 mesh. works ton	20.00	_
	Optum, USP, gran. powd. 25-kilo	20.00	-
	lotskilo	125.00	
	Orange oil, expressed, USP, CBIII.	120.00	-
	dms., i o.b. plantib.	4.00	
	expressed Valencia, dms lb.	1.20	-
	Callf., dist., cns. f.o.b. plant ib.	.75	-
	Florida dos	1.25	
	Florida, dms	.60	.65
		.90	-
	West Indian, bitter, NF X, cng.,		
	dmsib.	13.00	-
	Oranga peal, bitter, Haitlan bis jb.	.38	-
- 1	Oregano, Greece, 30M	2.80	-
	Turkeylb.	2.80	-
	Mexico	1.05	_
	Origenumoli, Spanish, cns idio	35.00	_
	Orris root, Florentine, bis ib.	4.00	
	powd., bbls., bxsb.	4,60	5.00
	Veronabisib.	3.00	-
	powd., bbis., bxs	4.60	5.00
	Ouricury wax, relid., pure, bgs lb.	3.25	3.35
	Oxalic acid, bgs., c.i., works ib.	.44	-
	b-Oxynaphthole acid dms. works,		
	techlb.	2.55	_
	Oxyquinoline base, pure, 1,000 lbs.		
	1rt. &   G ,   1b.	8.00	-
	Oxyquinoline sutfate, 100 lbs. frt.		
	alkd	4.00	_

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	Paliadium metal, works Troy-oz. Palm oll, (see Oils, Fats & Waxes Market	127 00	
	Paimoil acid, dbi-dist dms ib	.31\2	_
	Palmoli acid, dol-dist dms ib tanks. ib	.30	-
	8 d . dms	.42	.49
	tanksjb. Pelm kemel oil, bulk, c.i.i., U.S.	.35	-
	ports	.181/2	.19
	Palmarosa oli, indian dina kilo	42.00	-
	Pakritic acid, 90%, tech., bags ib.	.63 .51	_
	tanks		
	Imp. DUK	5B.00	-
	Paprika, Hungarian, 100 AU bgs lb. Spanish, 110 AU bgs lb.	.80 .90	-
	Spanish, 110 AU bgs ib. Paraffin, fully-refd., 127-130F., ASTM,		
	tanks, refy	.29	.35
	130-135 F., ASTM, tanks, refy,	.33% .35	.39
	140-145 F., ASTM, tanks, refy. 150-155 F., ASTM, tanks, refy.	.4172	.46
	I SMCX WAX. 5% Oil. (BUK9 MRV	.19	-
	12% of, tanks refy	.21 .18	-
	I AMP temperaturas are an arbitary 3F h	igher than /	ISTP.
	Paraformaldehyde, 91%, fleke, bgs.	.2912	
•	Paraformaldehyde, 91%, flake, bgs. c.l.t.l., divdb. 95%, powd., bgs., c.t., t.l. divd. lb.	.3912	Ξ
	Maravoertyde, tech., 98%, 55-gal. dmg.,		
	l t.f., afval, E	.761/2	-
	tanks, divd. E	.5812 1.76	
	Parathion methyl (see Methyl parathion).		
	Para toner red, bbis	3.75	-
	chlorinated, (red 4) kgs ib. Patchouli oil, indonesian., dms kilo	3.76 18.50	20.00
	Patchouli oil, Chinesekilo	19.00	21.00
	Patchcul oil, Chinese	06). kal razari)	
	i	t report).	
	Pectin dom., NF, citrus, powd., 100-		
	klio lots divd	3.30	3.70
	aldib.	.70	_
١	syn., lanks, f.o.b. frt. ald ib.	.70	~
1	elid	25.00	30.00
١	relaxion, processe, accise our parcir		20,00
1	unit iots, bulk billion units.	36.00	-
ı	Pennyroyal oil, dms	10.26	-
I	T.C.O. WICHILL, IVAN D.	.55	_
1	Penteerythriiol, tech., bgs., c.i., f.o.b.,		70
ı	frt.eld	.71 Dipentaeryi	.72. hritoi :
1	Tripentaerythritol).		
ı	Pentaerythritol triacrylate, t.l. dma.,	1 50	
l	Penioberbital dms., 100 lbs. or more.	1.50	_
ı	Pentobarbital dine., 100 be. or more, fri. eld	7.00	-
٠Ī	Pentobarbital-sodium, dms., 100 fbs.	44.00	
١	or more, divo	14.00	
I	ions	32.00	Ŀ
Į	Pepper, black, Brazilian, bgs ib.	2.28 2.30	. <u> </u>
ı	Lampong, bgsib. Malabar, bgsib.	2.28	Ξ
ı	telecherry, Dgs	2.35	-
i	Peppar, red Chinese Fuklen rice bgs lb.	1.00	
١	Land, bost	.78	-
(	Indian, 8-4, bgsib.	.70	٠ 4
١	Pegger, white, Muntok, bas In.	.43 3.05	, <u></u>
1	Indian, 8-4, bgs	3.05 2.85	•
1	Peppermint oil, Madres	14.00 16.00	•
۱	Wilamette	11.00	-
1	· Yakima	.8.00	
Ì	syn., dms. f.o.b. works	7.00	. 9,00
:	Brazilian kilo Chinese kilo	6.50 6,90	·
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ı Ti	CAL MARKETING REPORTS	int	اعراما ا

CHEMICAL MARKETING REPORTER 57

9.00

3. 14. **57**.

# Phtheiccyanine bius toner, water disperable, bbls., same basis. Phtheiccyanine green toner, siligrades, bbls., fri. alid. E. of Rockies. Description of Rockies. Descrip

	<b>M</b>		ies	- 9.30	14.00	Potassium Diarvate, N
PRICES	~-		Phthalocyanine green (oner, resinated obls., same basis	l.		Potasskum borohydrki
DDICE	_		Phthalyfsulfacetamide, dma., 500- kk	. a.vo	9.45	100-1,000 lbs. Potassium bromate,
PRILE:	•		lotsklig Picolines, reid, mixed, bulk kik	. 6.61	-	200-lb. dms
			Picric acid, pure paste, 25-lb. cins., c.i.		-	works Potassium bromide, N
WEEK ENDING NOV 1			dry basis, f.o.b. Charlotte	6.00	_	c.l. f.o.b. work Potassium carbonate, i
AFEK ENDING NOV I	4, 190	0	tech., pasie, 25-lb. ctns., t.l., dry ba	-		tenks, t.w., wo
Perchioroethylene, dry cleaning grade			als, f.o.b. Charlotte, N.C lb Pigment green B, kga lb	. 5.00 . 2.20	-	dms., c.i., t.i., works. calched, 99-100%
distr., tanks, divd ib. Indust, grade, consumers, tanks,	2	81/2 -	Pilocarpine hydrochloride, USP, dms		2 000 00	10 8180
Peri acid dina	3		Pimento see Alispice	-	E,000.00	works bgs., c.l., t.l., work
Permanent red 28. (red 48), calclum			Pimento leaf oil, dms	13.90	-	drums Potassium carbonate
saus, oms., irr. and	5.21 5.21		bulk, i.o.b. works 100 ibs	47.00	53.00	400-lb. dms., 5
Peru balsam, f.o.b. ib. Petitgrain oil, Paraguay ib.	3.20 5.00	5 –	dms., c.l., t.l., same basis 100 (bs	51.00	54.00	Potassium chlorate, cry works
Petrolatum, USP, snow white, dms.,	•		a-Pinene, perfume grade klio tech. grade	1.62 .18	.23	powd., dms., c.l., wor
c.l., refy	.37		b-Pinene, periumery grade, tanks kito	2.30	-	purif., gran., 325-it shipping point
USP, soft white, dma., c.l., refy. b. tanka, refy	.37	75 –	tech. grade. tanks b. Piperazine, anhyd., dms., t.i., frt. alid.	.35	.40	Potassium chloride, ci
USP, lify white, drns . c.l. refv In	.31 .37		E	1.80	-	99.95% KCI, works
Petrolatum, USP, Ltty white, tanks, rafy	.30	15 -	lb. lota. frt. eild	2.25	2.35	USP cryst. dms USP gran., dms
USP, cream, drus., c.l., rofy ib. tanks, refy ib.	.36	l <b>6</b> –	Piperazine dihydrachlaride, 53%, dms., t.l., frt. alid	2.00	_	USP powd., dms
USP, SOILYBIOW, dms., c.l., raiv., ib.	.35	iO -	Piperazina haxahydrate, 44%, dms., 1,100-lb.lots, frt.ald lb.			Potassium chloride, agr Potassium chromate,
tanks, refy	.28 .34		Piperazine phosphate, 42%, dms., tl.,	1.60	-	dms., works
Pairoleum olich/see Asnhalt netroleum	. 28	Ō –	frt. alldb. Proeridine dist. 98% min., dms., c.l., t/.	1.80	-	Potassium citrate, NF, dms., frt. alid
Patroleum sulignato, 50-52%, sulignic			works	6.92	-	Potassium cyanide, dri lots or more, f.c
cont., HMW, bulk, works ib. MMW, same basis ib.	.48 .49		Platicum, meial, works Troy oz.	5.00 533.00	Ξ	Potasskyn dichromate (
LMW, same basis	.49. Br. lb., lov	.4914	Polycarbonate resin, pellets, rist., t.i., frt. alid ib.	1.84	1.86	bichromate). Potessium fluoborate, te
sponding molecular wts. Phenacetin USP, powd., 200-lb. dms.,		00110-	Polyester resin, unsaturated, o.n., or-			l t.l., works, frt, e
1,000-10. lots, divd In.	2.20	_	thophthalic, bulk, tankcars, frt. ald	.51	.53	Potassium fluoride, s
p-Phonetidine, dms., c.i., f.o.b b.	2.22 2.00	2.45	sophthalic, same bestsib. Polyethylene resin, high-density, blow	.56	.62	Potassium gluconate, d works.
rnonoparbital, USP, dms., 500-kRo		_	motoling, g.p., hopper cars, frt.			I Price W. of Denver 4c
lots, f.o.b. works	19.50	-	injection moiding, g.p., hopper	.44	.52	Potassium gualacolsulf dms., 600 lbs
Phenol, syn. tanks, frt. equald	27.00 .25	_ .29	cars, frt. elid	.43	.48	eouald
p-rhenoisuironia acid, 65% soi'n		.20	basis	.47	.48	Potassium hydroxide, te Potassium hydroxide,
dms., c.l., fob works b. tanks, same besis	.64 .58	=	wire and cable, nat., hopper cars, same basis	54	.65	100-b. dms., d frt. equald
baos, c.l., f.o.b, works,	2.33	-	i ware and cable, black, same ba-			Potassium iodide, USP
purif. grade, same basis b. Prienyl acetate, dms., 100-ib. lots,	2.69	-	sis	.65	.75	dms., 1,000-lb. ACS grade trucki
WORKS	1.04	_	liner, hopper cars, frt ald lb. clarity film, hopper cars, frt.,	.35	.36	Potessium-magnesium
Phenylacetic scid, pure cryst., 25-tb. cns	4.50	_	alki. ib. pallet shrink film, hopper cars,	.35	.37	basis 40% K <sub>2</sub> 8
di-Phenylafanina, dma., 25-kilo		_	I SBITTO NAMES IN	.35	_	MgSO, bulk, wo Potassium metablaulfat
I-POCOVI-3-CRIDALBOXV PARAZONAA.5	84.00	-	extrusion coating, hopper cars, same basis	.30	.42	1 th
dms. 200-lb. iots, divd. E lb. m-Phenylenediamine, cast, dms., c.l.,	3.45	-	g.p., hopper cars, same basis . ib. Polyethylene linear low-density g.p.	.37	.36	Potassium muriate, 6 K <sub>2</sub> O, std.,
o-Phenylenediamine, flaked, dms., t.t.	2.07	-	I resin	.36	.40	i it. equald., i
T.O.D. WORKS	3.25	-	Cast film resin	.40 .40	4312	Canada
p-Phenylensdismine, flaked, dms. f.o.b. works ib	4.00	_	i monyethylene resin, low-density injec-	.40	.45	Sask. coarse, f.o.b. Sask.
100-kilo lots or more 140	175.00	185.00	tion molding, g.p., hopper care, same basis b.	.45	.48	Oran f.n.h. Saak
Phenylethyl acetete, dms	3.35	-	line wire, CATV, power cable lb. wire and cable thermoplastic high-	.70	1.15	Potassium nitrate, fert, q ton c.l., divd. SE
и-говиунатине, ств., 30,000 lbs.	2.10	2.20	VOICEGE, NEULTEI COICE, seme			prilled bgs., c.i.,
Phenylethylphenyl acetata, 25-ib	1.50	-	basis b. wire and cable, XLPE low voltage,	.60	.90	1 <b>di</b> vd
cns ib. Phenylglyconic scid (see Mandelic scid).	5.50	6.90	14% carbon black, same basis		~~	gran., powd., 30
MICHANIYORAZINA 99% min almo ib	3.50	_		.68 .60	.73 .61	equald. Potassium pentaborate
1-Phenyl-3-methyl-5-pyrazolone, dms. 250-b. lots dvd. E ib.	1.80	_	Polymyxin sulfate, USP, bulk, 50-billion units minmillion units	.62	_	C.l., works
o-Phenylphenol, dms., t.l., works tb. p-Phenylphenol, bgs., t.l., 40,000 bs.	1.35	2.00	Polyoxyethylene sorbitan monos- tearate, dms., 20,000-lb. lots,			dms., same basis. Potassium pantaborate p
Ormonii works	1.85	-	WORKS 16	.73	_	Potassium perchiorat
Phenylpropanolamine hydrochloride, 100-kilo dm kilo	24.00	28.00	Polyoxyethylene sorbiten tristearate, dms., 20,000-lb. lots,			worke. Potassium permangana
E	2.75		works	.73	-	ing, bulk, hop works
IBCI CIVXV P	2.25	Ξ	g.p., nat., t.l., frt. alid ib. copolymer, med. impact, nat	.45	.48	; DU-Kg. dms., same b
Phioxine toner (red 90), dms., frt.	2.35	-		.50	.56	150-kg. dms., same Potassium permanganat
Phosoene, 1-ton rat, cyts, 5 to 9-ort	1.95	2.05	high impact, same basis	.53	.60	kgs., works, c.i. Potassium paraulfate,
quantities, works	.55	.67	each grade. Polystyrene resin, cryst., nat., hopper			24,000 lbs. or m
Of MINE WESHED, BR-RR% h m I			COUS. ITT. BACO	.47	_	plantcl/ti same basis
bulk c.l. mines ton vessel, Tampa, same basis ton	23.15 28.00	-	include, nat., nopper care, same ba-	.48	ro	Potassium pyrophospha bgs., c.t., t.i., y
Phosphoric acid, com'l. and tech. grades, 75% tenks.			Care same books		.50	eguald.
works	29.00	-	s avhallowble celeda lebis, chalae	.49	.52	liquid, bulk Potassium salicylate, US
0076, N.F. LBDKS, Co.b. freight	31.00	-	modified same haule	. <b>69</b> .71	- .73	lb. dms., 2,000 works.frt. alid
equald	33.50 ude.	-	Polyvinyi alcohof, fully hydrolyzed, medium viscosity, bgs., t.L.,	.,,	./3	USP, powd., 300-lb. dn
Phosphoric acid, agricultural grade, 52-54% a.p.a., tanks,				1.00	1.05	or more, same be Potassium allicate, soir
WOIRS	3.10	_	ity, bos. 11. ches	1.05		96., 2.5 ratio
super, min. 70% a.p.a., same basisunit-ton.	3.45	_	Polyvinyi Chloride resin, g.p., homo- polymer dispersion, bgs., t.i.,	1.00	-	worke
C.I., works, Irt. squald in	1.00		ulvu be	.50	_	Potassium sliicate, 40-40 tio, Lc., Lt., work
tanks, works, f.o.b. works b. Phosphorus oxychloride, tanks, frt.	.91	=	sis bushevatou, bulk, same ba-	.38		40-40.6 Ba., 2.1
GCTURIO	.40	_	pipe grade, bulk, same basis 5. film grade, bulk, same basis 5.	.47	-	c.i., t.i., works. Potassium siicate, electi
dma. cl. works 100 be	50.00		CONTROL CHOOSE OF A CARALIMAN AS	.37	.47	30-30.4 Be., 2.1-
tole burs, sellers 100 lbs. Phosphorus pentoxide, dms., i.i.,	45.00	-	g.p. copolymer ausoension, serve	.58	.61	tt, works
	.82	_	Poppyseed, Dutch, bres	.45	.49	soud or glass, 2.15 rat
C.L. works	.38	_		.59 .53	-	SONG OF CHARR. 2.5 ratio
works		_	Potash, caustic to, 45% basis tanks	te).	Ì	"Ratio" indicates percer
MUKS. WORKS.	.40 .35	-	Wast Coast 50% harte tester	13.00	_	Potassium alicoliuoride,
Phihalic anhydride, flake, c.l., t.l., dms., frt. equald	.30	_		18.08	_	TET. GETTIGN-C
Prices 1-1 Yzc. per lb. higher on the Weet	0.7	-	- AB. 1970-05 W-400-ID GILLE" 01"	42.35		Polassium-sodum tartra or powd., dms.
Prichalimide, flake, worksb. Prithalocyanine blue toner, rod shade,	.85	_	works F		-	Potassium somate, t.l., dn
DDI9., IC. 810. E. of Rockies n	9.45			.90	1.81	1 UUGSALUTI SCHIMA RAYA
green shade, same basis ib. resinated, bbis, same basis ib.	9.30 9.10	· . · !	Potassium bicarbonale usp cuin	.311/2	. = -	In make
		INICO PARENT	Carrello	.72	· <u>-</u>	Potassiumaufate, gran., dm.
58 · CHEMICAL MAI	errang.	TATE KEEC	RTER November 17	. 1000		William Control of the Control of th

Potasskim bichromate, gran., 400-2; dme., g.l., t.l., works it		_	Potasaken tetraborate, gran., bgs., o.t.	
Potassium bifluoricie, tech., dms., t.i. works., frt. equald		.49	worksb. dms., same basisb.	1.10
Potassiumbitarirate, NF, gran., powd.			Polassium thiocyanate Light control	ton ligher
bgs	,	1.20	tech., cryst., rime 1)	4.01
100-1,000 lbs., works tb Potassium bromate, gran., powd.		20.00	works citaliate, ctns., c.l.,	.62
200-lb. dms., c.l., f.o.b.			dos 11 works 41 tech.	.71%
worksib Potassium bromide, NF., gran., dms.	,	-	) · Cussidili-Zii CORDIII Tillorida task	1.24
c.i. f.o.b. works ib Potaaskimcarbonate, Iq., 47% K <sub>2</sub> CO <sub>3</sub>	L .	-	dms., t.l., works, fit. equaldlb. Prednisone USP. dms., 5 kilos or	.78
tanks, t.w., works 100 fbs dms., c.i., t.i., works 100 fbs		-	more and, o kind or	1.03
calcined, 99-100% K <sub>2</sub> CO <sub>2</sub> , hoppe cars or trucks	Г		klios or more	1.12
works 100 ibs	. 32.50	-	Prednisolone, anhyd., USP, dms. 5 kilos or more	
bgs., c.l., t.l., works 100 lbs drums 100 lbs	. 38.40	-	otic grade, dms., 2.000.h	1.12
Potassium carbonate, gran., purif. 400-b. dms., 5-dm. lots lb	40	.46	otic grade, dms., 2,000-lb. lots, frt. alid	4.95
Potassium chlorate, cryst., dms., c.i., works			USP, ampule grade, dms., 1,000- ib, lots, frt, alidb.	
powd., dms., c.l., works	30	-	I PTUDIONEIGENVOS, LANKS, LA h	4.95 .351 <sub>2</sub>
purif., gran., 325-lb. dms., f.o.b. shipping point	40	_	Propionic acid, syn., pure, tanks, divd.	.33
Potassium chloride, chemical grade, 99,95% KCl, bulk, c.l., f.o.b	;		n-Propyl acetate, tanks, divd. b. n-Propyl alcohol, tanks, divd. b.	.53½ .42
workston USP cryst. dms	105.00	-	lots, divd	11.50
USP gran., drns	67	-	500 kilos	10.80
USP powd., dms	otassium m	- Iuriale).	I 10521 SOLUKIMALIAN LIILA	48.66
Potassium chromate, purif., cryst., dms., works		_	Propyl paraben (see n-Propyl-p-hydroxy Propyl thiouracil, dms., 50-kilo lots of	(US (ZURNI)
Potassium ckrate, NF, gran., 200-lb. dms., frt. alld		_	n-Propylamine, dms., c.i., divd b.	55.00 .75
Potassium cyanide, dms., 20,000-lb.			Propylene, polymer grade, f.o.b. Tex. and La. Gulf Coast points . b.	.17%
lots or more, f.o.b. works ib. Potassium dichromate (see Potassium	1.32	-	Prooviene giveo), indust, tente, f.o.b. in	.15% .40
bichromate). Potzasium fluoborate, tech., dms., c.i.,			Propylene glycol monomethyl ether	.43
t.l., works, frt. squaid ib. Potassium fluoride, anhyd., dms.,	1.40	1.42	tanks, divd. E	.49
u	1 68	_	frt. equald b. Psyllum seed, USP powd bgs b.	471
Potassium gluconate, dms., t.l., f.o.b. works	1 45	_	Pumice, Com., fine, 4F-0, bos., ton	1.50 1
Potassium gualacolsulfonate, 300-lb.	1		kotston medium, 01/2-11/2, bgs., ton lots . ton	270.00 300.00
dms., 600 lbs. or more frt. equaldlb.			coarse, 2-exira coarse, bgs., ion lots	300.00
Potassium hydroxide, tech. (see Potas Potassium hydroxide, USP, pellets,	h. caustict	•	lots f.o.b. East Coast ton	280.00
100-to. drns., c.l., t.l., works.			medium, bgs., ton lots. f.o.b. East Coastton	350.00
frt. squaid ib. Potassium iodide, USP, gran., cryst.,		1.33	coarse, bgs., ton lots f.o.b. East Coast ton	300.00
ACS grade truckload	10.72 11.32	12.39 13.55	Pyrazolone red (red 38), dms., works.	13.00 19
Potassium-magnealum sulfate, std., bgs., workston		10.00	Pyrethrum flowers, fine grd. 0.9%	
08818 40% K <sub>2</sub> 80, and 55%	i	-	pyreihrins, ion lote, frt. ald.ib. Pyrethrum, purif., 20% pyreihrins,	1.91
MgSO, bulk, works ton Potassium metablaulfate, gran., dms.		-	drns., works	37.50 37
Potessium muriate, 60-62.4% min.	.44	-	dxns.,kilo tankskilo	5.90 5.70
K <sub>2</sub> O. std., bulk, c.i., frt. equald., f.o.b. Sask.,			Pyrkloxine hydrochloride, USP, 100 kilos or more, dvdkilo.	38.00
Canada ton soluble, fine std., f.o.b	44.00	45.00	Pyrites, Canadian 48-50% S. mines	4.50
58sk	47.00	-	Pyrogalic acid (see Pyrogalici)	7.00
coarse, f.o.b. Sask. ton gran., f.o.b. Sask. ton	49.00 50.50	50.00 51.50	Pyrogalioi, 100-lb. dms., 1,000-lb., lots, divdlb.	13.70 15
ton c.l., divd. SE	267.00	274.00		
prilled ton tech., gran., bgs., c.i., min. 50 tons.	277.00	284.00		
divdton Potassium oxalate, neutral, tech., fine	470.00	-		
gren., powd., 300-lb, dm., frt.				
equald	2.54	-		
dms. same heals	1.01 1.06	-	Quassia chips	.57
Potassium pentaborate powder 15c. pe Potassium perchiorate, dms. c.l.,	rlb. higher.		Quinacridone maroon, dms., frt.	27.00 35
WUKB	.78	_	red, dms., frt, alld lb. violet, dms., frt. alld lb.	24.25 32 24.90
Potassium permanganate, free flow- ing, bulk, hopper trucks.			Quince seed, bgs	2.00 2
50-kg. dms., same basis ib	1.09 1.20	-	dms., 2,000 oz. or more oz.	4.20
150-kg, dms., same basisib. Potassium permanganate, USP, 50-lb.	1.17	-	Quinine hydrochloride, NF, 1,000-oz. dms., 2,000 oz. or more oz.	2.45 25
kgs., works, c.i., t.i lb. Potasalum peraulfate, 225-lb. dms.,	1.38	-	Cluinino sulfate, USP XVIII, 1,000-oz. dme., 2,000 oz. or more oz.	2.30 25
24,000 lDB, OF MOTE To h			Quinofine, drns., t.l., frt. equaldb. tanks, same basisb.	1.49 1.43
plant	78.80 72.50	-		
bas, c.i. t.i. works E. t.s.				
iquid, bulk 100 lbs.	63.75 46.00	64.00		
Potassium salicylate, USP, gran., 200- b. dms., 2,000 bs. or more,	40.00	49.50		_
WORKS, ITT, SRA	1.52	_		2.12
USP, powd., 300-lb. dms., 2,000 lbs. or more, same basis lb.	1.42	_	R salt tech., 304 molecular wt b. Recemethionine, USP, 50-250	
Be., 2.5 ratio to the			kilos	6.80 6.60
works	18.90	-	500 or more king	6.50 1.07
	25.90	-	feed grade, 98% min., c.l., t.l. b. Rapeseed oil, dms b.	.5814
tio, L.C., t.t., works 100 lbs. 40-40.5 Be., 2.1 ratio, dms.,	25.05	-	deno	22.00
Potassium secata, electropics crade	32.05	-	ted cambre. No. 40 (886 Cambre 188).	. 40 . 10
Lt, works 100 lbs	00 40		Reserpine, USP, cryst., dots yours	
dms., c.l., t.l., works. 100 lbs. solid or glass, 2.15 ratio, dms., c.l.,	28.10 33.10	=	Pagaratural LIGID crust class 50 kilos	3.96
	53.30	~		9.35 9.90
acute of flates' 5'0 Letto' que' c' ' fT'		_	powd. dms., same basis	1,98
Decembrate provincials to Metal	nt of SiO <sub>2</sub>	divided by	bs. or more.	9.95
otassium alicofiuoride, bgs., c.i., t.i.,			DTMA dries. 1.0.b.	140
olassium-sodum tartrate, NF, gran.	.111/2	.15	Charles OF France	00 105 W
Missell of South College Colle	.60 2.50	1.20 3.10		<b>A</b> 3
otasskim sumate, cl., oms., dvd. ib. otasskim sumate, dms., irt. alid., ib. otasskim suifate, agricultural grade, min. 60% kgQ atd., bulk, o.l., f.o.b, works.	N.A.	~	Ribubarb root, india, whole, but he powd., bga. Riboflavin, feed grade, 28 kilos.	
min. 60% KgO std., bulk, o.l., f.o.b. works	180.00	400	. HIMMORY AND SUCH TO A CARROLL OF THE	學然
Otaesium autiate, oran., ryeli 400 ili		180.00	Riboflavin, USP, 25 kilos, dvd. Riboflavin, 5-phosphate socium, signification kilo lota.	THE STATE OF
dm	.86	-: 1	kilo lots	1. 開始

•	Ricebranoil, refined dms. t.i		.25 -	_
•	Rochele salt (see Potesaurr-Souli	ofino.)	).	
:	Rose al, nst., NF, Busgarian, obs	kilo. 5.700	.00 - .00 7.500.0	n .
	Rosemary off, NF, Spanish, Orms.	kilo 15	.00 11.00	)
14	Rotenone resin, 30-45%, 100-lb. c worksuni	HTIS.	.21 .23	•
	A			_
	2			J
	1 3			J
•	a Luis NE cure coluble di			-
М	Sechario NF, gran., soluble, di 1,000-lb. lota, frt. alid Sechario NF, powd., soluble, dma., l	.Ho. 2.4	50 2.75	
550	than 20,000-lb. lots, frt. allot Suffower oil, non-break, tanks, N. Y	lb. 3.7 lb6	55 -	ł
Sty	edikedma., N.Y., divd. Segeleaves, Dalmatian, No. 1, bgs. Aberian, bgs.	jb. 1.8		ľ
A	Turkish	lb. 1.2	5 1.30	1
	Galmatian, ons.	ilo 19.0	iO IO 21.00	
:	Safoyleidehyde, tanks, f.o.b	S.,		
	Salcylic acid, tech., dms., c.i., t works	.L.,		- 1
Ŋ	USP, cryst., cms., 1,000 fbs.	ib. 1.3	3 1.63	
ij	more	b. 1.6	8 -	
л Ж	Set, evaporated, common, 80-lb, bgu cl., tJ., North, works80 lb	8. 4.0		
•	bulk, same basis	8. 4.3(		- [
1.75	als	s. 976		1
:	N.SO, bests, f.o.b. works E to same basis W to	n 65.00		- [ '
	Sanganyood oli, E. Indian	0 185.00	1	13
•	Sarcosine, tech., tanks, works, fr	t.		Ι,
•	Schaffer's salt, paste, dms., 1009 bass, works	2.59	_	١
1545	Sebackadd, CP, bos. Cl. works 11-	. 36.00	46.50	8
	puil, bgs., c.l., works. lb. Sédiz récure, drns., 5,000-lb. lots. lb. Sérium, powd., 99.98% Se, drns.	1.94	V2 -	s
37.75	cont.99.5% Se game backs	. 13.00	15.00	S
:	Milita	ا	.80	8
•	Trizevij, No. 1, bls. ib. post, bbs. bxs. ib. Sesareol USP, dms., I.c.l. ib. Sesare de Control	.90	.71 1.10	1
501	had be American		1.20 .58	s
152	ici, worke	.199	4 .2814	S
	Stor, amorph. dry-grd., bgs., c.l.,	.181 31.00		S
	93% 97% 325 mask	32.00 34.50	32.50 33.50 35.50	ł
	Sect. dry and, box. c.l. weeks. CO.	37.00 51.60	54.50	Sc
	99% under 15 miles ton	72.00	76.50	Sc
	994 undo- 40 100	79.50	82.50	Sc
32.2 35.2	Grotzed	104.00 37.00	105.00	80
275	works works, tech., dois., c.l.,	34.75	Ξ	So
425 250		.50 .36	-	So So
250	Shre bullon ingole, ce., Troy. oz. Shre ryanide, 80% Aq. 600-oz. lots oz. Shre ristle, ACS, 88.2 Troy oz. AQI/ 500 ayok. oz. AQIMO.	5.755 4.586	=	
•	100 evolr, oz. AgNO <sub>3</sub> oz. Sospherk, crushed, bis	3.437 1.00	-	So
	bgs. c.i., works, f.o.b., paper	1.35 120.00	1.85	So
	W 18%, 100-fb., paper bos. C	83.00	=	So
	Soda, Causio So. Sono. ton	160.00 123.00	-	So
	Ouli Coast works, f.o.b., frt. equal, 76% Na <sub>2</sub> O ton.	175.00	195.00	Soc
	sold, 76% 700 is of works . ton.	205.00 500.00	225.00 870.00	fi
	9 in., 76%, 450-ib drage ton.	<b>620.00</b>	570.00	l te
		520.00	-	Soc
	Higher for sold 15 ton highe	27.50 r. Prices In	28.50 West 70c.	fc
•	total section and \$20-\$30 to total section and section	······································	gran. and	Sod
	Manual Works	3.35	3.86	þ
	Stand address of works.	.64 57	-	bı Sodi
	State of More Powd.	.57 6.00	6.75	or
9	Monte or more, i.o.b.		J.10	Sodi
	William A. Third DOG of A. J. T.	4.73 1.49	1.50	8odi
Ø .	Denzoen kijo	9.30	10.50	
	at it in war 50-b bas.	701/2	-	lm
		831/± 861/±	-	
	tribita, cai, Li., same basis. Ib.	.89 .92		8odk
		*		: . :

	Sodium bicarbonate, USP, powd., reg. grade, bgs., c.i., t.i., works, frt. equad			Sodium orthosilicate, tech., anhyd.,	
	I SYGUGIIII INNINA			annyo	
		17.05 18.05	-	Socium orthosiliosta, tach hydrated	34.60 _
	gran., same basis 100 bs.	17.20 17.85	-	DOR CI Works, WORKS, 100 IDS.	27.45 -
	Sodium bichromata grap bos of the	17.80	=	Sodium pentachiorophenese has yo	26.25 - .45 -
	Sodium bifluoride, 400-lb, dree	.57	-	box box or an all a constant lib.	.67 ~
	100-lb, bos. Cl. same book	.78	_		.66 Odfum).
	dms., c1	.76 175.00	-	DOS. C. I. I. Works 1807.	.321/2 .3
	dms., c.l.,	13.00	-	Ibs. or more 1 o b stees	631/2 -
	works. West	28.50 32.00	-	Sodium phenoharbital /goo Bhosabarbital	
_	basis, works, Fast 100%	_	-	Sodium phenosulfonate, powd., dms., lb. Sodium phoaphate, anhyd., dibasic	.76 -
	photographic grade 43% role	20.60 20.00	-	equald	
	Sodium borate NF, gran., bgs., c.l.,	21.90	_		54.60 - 57.60 -
		.51	_	Sodium phosphate, monobasic, tach. same basis 100 fbs.	55.75 _
	Sodium borohydride, powd dms	.52	-	tribasic, isch., same basie 100 lbs.	59.75 <u> </u>
	Sodium borohydride, stelpilized union	19.88	21.90	Chloridated, same basis, 100 lbs.	83.25 _ 31.60 _
	3000 del tenhundon modes la	47.4			30.50
	Sodium bromide, 99%, gran., 400-b. dms., f.o.b. worksb.	17.46	-		35.60 _
	p Courin Certochia(B. Cacamertrala Lea	1.04	-		19 2
	C.I., t.I., workston. Sodium carbonate, cryst. monohydrate (;	264.00 <b>888</b> Soda.	ash)	Sodium picramete, tech., paste. 200- b. dme., dry basis, divd ib.	5.50 _
	bas al ti works	000.00	,	more for the sile	.54 _
	Sodium chlorata, crystal bulk to the	MC.)	-	C.I. Works, frt. squidt 100 lbs	58.25 _
	deheard D.S ton	330.00	-	Works fit sought 400 %	
	CONTROL CITY AND AND AND AND	335.00	-	COUNTY DYTODIOSONALA JAMIC Above	31.25 _
	Sodium chloride tech (see Seu)	.27	-	o.l., tl., works	.3880
	Sodium chloride, USP, gran., bgslb. Sodium chlorite, tech., drns., c.l., works	.29	-	Works, frt. equald. 100 lbs.	14.75 _
1		1.17	1.27	als1001be	2.50 _
1	Sodium chromate, tetrahydrate, hoe	.67	-	913	3.00 -
1	c.l., t.l., works ib. Sodium citrate, gran., anhyd., 200-ib.	.64	_	Sodium salicylate, USP, cryst., 200-lb. dms., 1,000-lb. lots or more,	- 10.00
1	GVINSC.IT.I. N.Y (L.	1.95	-		3.00 _
1	Sodium citrate, USP, gran., dihydrate, 100-ib. bgs., t.i., f.o.b. ship-			I IDIS OF ITLORA SAMA hanke ils	3.05 -
I	Sodium cyanata, dms. 1.000-lb, lots	.7472	-	Sodium sesquicarbonate, bulk, c.l., t.l., works	0.00 _
ſ	Sodium cyanide, briquettes or gran	.85	-	Sodium silicate, solid, or dess. 3 22.	6.00 -
ĺ	divd	.71		9.25 FB(IO, DUIK, C.I., 1,I., WORKS	5.70 -
1	Sodium diacetate, arrivd., drns., c.i., works.		•		7.76
ł	Sodium diacetate, FCC, 50-th, bos	.68	-	works	0.30 _
l	t.I., divd. E. of Rockies ib. Sodium diacetate, tech., 50-lb. dms.	.61	.67	8011. 37.6° solid. 3.22-3.25	2.15 –
	Sodium erythorbate, powd., gren., ti	.52	~	equald	6.30 _
ĺ	or mixed t.l., r.o.b. shipping	2.60	2.85	percentage by weight of the C	of SIO <sub>2</sub> divided
ĺ	Sodium ferrocyanida, bos. t.l.	r.	00	works frt. eouald 100 ha 1	7.95 19 <sub>-</sub> 75
	works	.60	-	Sodium sulfeniate drug works. Int. aid. E.b.	N.A. –
	sodium fluoride, white, 97%, 400-ib.	1.77	-	Sodium sulfate, NF XII, powd., dms., 2,000-lb. lotslb.	.22 -
	ums., C.I., works, frt. eguald. B	.6345	-	techt, detergent, rayon-grade, c.i.,	.231/4 -
l	100 bgs., c.l., same basis ib. USP powd., 200-ib, dms., t.l.,	.60	-	Sodium suitate, West, bulk, c.l., works,	0.00 96.00
١	f.o.b. shipping point ib. Sodium formate, bgs., c.l., works ib.	4.69 .20	-	bulk, Ci.i. East, same basis, ton 113	).00 101.00 l.00 114.00
ľ	2,500 lbs. or more frt. elld. %	.60	_	bgs., c.l., works	.00 53.00
ľ	Sodium hydride, oil dispersion, 60% NaH, 167-lb. dms., 10 dms.,			Sodium aulfhydrate, flake, 70-72%, dms., c.l., works, frt.	.00 03.00
9	Sodium hydrosuilide, fees Sodium suilbydro	1.86	-	equald	.00 -
8	SCOLUM NYOLOSUMES, CMS., C.I., L.I.			I equald	.00 _
8	f.o.b. shipping point E b. locium hydroxide, USP, pellets, 100-	.64	-	Sodium sulfide, flake, dms., c.L, works, E., frt. squald ton 470	.00 –
	ib. Cims., C.I., t.I., works, frt.	.98	1.08	ogs., same basis ton 410 Sodium suifide, fused, dms., c.i.,	
8	odium hydroxide, tech. (see Soda, caustic iodium hypophosphite, EN grade, 300	.)		works, E., frt. equald ton 240, Sodium suffite, anhyd., tech. 95-100%	.00 –
	10. dms f.o.b. works lb.	1.425 1.47	1.60 1.52	bgs, f.o.b. works 100 lbs. 23. Sodium sulfocyanide CP (see Sodium thiocyan	76 -
8	odłum hyposulfite (see Sodłum (hlosulfate) odłum lodde, USP, cryst., 300- to 500-	).	1.02	Scorum tetraborate (see Borax).	nausj.
		4.72	-	Bodium tetrasulfide. ilq. 34%. dms., o.l., works, frt. equald ion 540.	00 -
	LO.D. WORKS	.29	.32	Sodium thiocyanate, purif., cryst., 250- ib. dma., 5 dms. or more	_
	odium lignin sulfonate, bgs., c.i., works	5.50	-	f.o.b. worksb. 3.5 tech., anhyd. dms., 2,000 lbs. or	26 -
8	odium metablaufite (see Sodium bisulite). odium metaborate, octahydrate,			Sodium thiosulfata, tach., photo-pracie.	97 -
	gran., ogs., c.i., worksb. tetrahydrate, gran, bgs, c.i.,	.38	-	annyo., 100-ib. bgs., c.i., t.i., i works. iri. squaid 100 fts. 46.4	io
S	works	.49	-	cryst. peniahydrate, c.i., t.i., same	
	c.i. works	.93	-	Sodium titanate, dms., c.l., works., lb.	44 -
	worksb.	.87 .70	- ec	Sodium trichloroscetate, 95%, 50-lb. bgs., cJ., frt. alid, E	8 -
S	tanks, works	.70	.80	Sodium tripolyphosphete, tech., bos., o.l., t.l., works. frt. equald 100 lbs. 39.7	5 -
	c.i., f.o.b. shipping pt. irt, equald 100 bs. 61	.60		Duk, hopper care, same basts, 100 lbs. 37.5   food grade, bgs., c.l., t.l., same ba-	
	iocu grada, ogs. c.i. r.o.b. mr. equair.	.25	<b>.</b> .	sis	0 -
	works	.25	_	dms., 10.800 lbs. of more, frt.	5.50
	bulk, c.l., works		-	elid	
	png point 100 ba. 18	.95	<u>-</u> .1	Sodium-ammonium phosphate, purif.,	. •
So	dium molybdate, anhyd., dms. f.o.b.	.20 .27	_ `	Sodium-formaldehyde sulfoxylate,	
. (	xyst., dms., t.i., same basis ib. 4,	.87 .12	-	dms., t.l., f.o.b. works fb	
50	dium naphthionate, dms.; c.l., t.l.; f.o.b. works	.00	- 1	fb. lots or more, works. y. , lb	
50	dium Nitrate, USP, bgs., c.l., f.o.b., frt. equald 100 lbs. 34.		_	Scivent naphtha, patroleum, streight aromatic, b.r. 320°-350°F,	٠
80	dium nitrate, dom., industriel, bgs., o.l., works	·	.00	56°F m.a.p., tanks: New Jersey	. ; 4
Á	bulk, c.l., works		•	Houston	
."	Guff whee		.00	Solvent nephtha, petroleum, straight aromatic 410°F, 60°F m.a.p., tanks:	br. 360°F
•	bulk, c.l., same basis ton 182. Imp., agricultural, bulk, c.l.,		- "	New Jersey	1.35
300	same basis		<u> </u>	2 Minois	1.35
	frt. equald	20	e. en lin gy (k. sv)	Sorblosold, t.f. ame, and	3.10 CHERMO

ALIFULALI
CHEMICAL
PRICES
INVLO

-00	72			
-		WEEK ENDING NOV	14, 198	3
•		Sorbitan monostearate, dms., c.i., t 30,000 lb. min., f.o.	h	
-		Sorbitan tristearate, c.l. t.l. 30 000	lb78	-
-		Sorbitol, USP, reg. 70% agueou	b80	-
.75		dms., c.i., f.o.b. shippia point. tanks, i.o.b. shipping point.	h 95	_
-		POWE dris. Cl. I.I. works	b70	.74 .72
-		Sovbean oil (See Oils, Fats & Ways	es market re	
.20%	1	Soybean oil acidulated, scapstoc 95% acid, tanks, New York Soybean oil, acid, dbl., dist., dms il	K,	.15
-		8.d., dms	b43	.59 .44
-		Scearmint leaves Imp. No.	D38	.58 .43 2.70
-		Spearmint oil, Far Weat, native	o. 5.60	-
_		Soruce oil drag		Ξ
		Stannic chloride, anhyd	29	.30
_		Stannic oxide, dros. works	. N.A.	Ξ
_		Stannous chloride, arhyd., drns. wks. it Stannous fluoborate, liq., conc., drns. t.l., works, frt. equald ib		-
		Stannous sulfate, driss, works,	N.A.	-
_		Single-pressed, bulk ib	26	.39 .375
_		triple-pressed, bulk b Stramonium leaves, bgs. b Streptomych suffate, USP, bulk. kilo	32	.40 .20
-		ti worke glass grd., bgs.		
-		works	5160	· -
_		tt. f.o.b. works		.27
-		Styrene-acrylonitrile reen, net., bulk f.o.b. plant	77	٦.
- led b		Styrol acatate, dms.	77	.81 .81
	" ]	Succinic acid, purif., cryst., dms., t i frt. sild		2.10
75 -	-			-
•	-	Sucrose, refd., white, bgs., c.l., f.o.b refy. E	_	-
00	1	tanks, divd	1.18	-
20	1	100%, dms., t L, dwd ib. Sucrose octa-acetate, denaturing grade, 100-lb. dms., f.o.b.	1.18	-
)O )O	1	Workskilo	12.50 39.50	13.60
	1	kios	25.00	_
	l	Sulfacatamide, USP, dms., 500 kilos	20.00	23.50
	ı	Sulfadiazine-sodium, USP, dms 500	53.00	-
	l	kilos	40.70	-
		dms., 500 kiloskilo. USP, powd., dms., 500 kiloskilo. Sulfamethazine.sodkim, USP, powd.	33.50 32.00	-
	1	dms., 50 kilos kilo. Sulfamethezine, powder, dms., 500	13.00	-
		kilos	9.00	10.00
	٤	Suffamic ecid, gran., dms., c.i., t.i., works	38.00	41.00
		frt ecueld	.36 2.00	-
		works	.671/2	_
	s l	ullequinoxaline, veterinary, grade, dins	8.00	~
		vessels, Guifportslong-ton f.o.b. i.e. refylong-ton recovered, chvd., Houston, long-ton	150.00 126.50	=
	ĺ	recovered, divd., Houston. long-ton ex terminal, Rottendam long ton f.o.b. tanks, Alberta, Canada, for US	125,60 135,00	-
		dervery long-ton	102.00 157.50	-
	8	Mur, crude, 99.5% min. purity, comi. flour, 50-lb. bgs., o.i., mines		_
	Sı	flour, 50-lb. bgs., o.l., mines basis	13.60 13.60	Ξ,
		50-10. Dags, c.l., mines ba-	17.50	
	<b>P</b> -		20.00	
		signt 50-00. ogs., same ba- signt reld., subtraced, NF, 99,85%, min. purity, 50-lb. ogs., c.l. mines basis	26.00	
	-			

J. Ju

November 17, 1986

ila, whole, bos d grada, 28 kilo

1.35 1.35 3.10

November 17, 1986 CHRMICAL MARKETING REPORTER

230,00

WEEK ENDING NOV 14 1000

TTELK ENDING NOV 12	1, 1986	
Sulfunic acid, virgin 100% tanks, works		
East Coast	71.75	96.90
GUIT COAST Ion	75.00	86.40
Midwest ton	80.25	00.40
Southeast ton	68.15	-
West Coast ton		-
MOTE: For orders on CO and CO D	85.00	
NOTE: For prices on 80 and 66 Be.	multiply by	/ .7767 and
· 33 i 3, i gapactivally, For Drice Ai	203% Jumin	<i>nn</i> io m os
is, add \$3-\$4 to above prices and	d multiply &	y 1.045.
- SUITURE BCO. SIDEROL. 100% lanks was	۸ <b>۵</b> ,	
Gulf Coast ton	4B.00	52.00
New Mexicoton	20.00	25.00
Southeastton	63.15	
93%, tanks, divd., Northwest, ton.	80.00	65.00
Sunflowerseedoll, crude, f.o.b. Min-	00.00	03.00
neapolis	.15%	40
Superphosphale, triple, 46% or more.	.1372	.16
a.p.a., run-of-pile, bulk, c.f.,		
Fig		
Fla unit-ton	2.75	3.05
bulk, gran., c.l., Fla ton	160.00	165.00

93%, tanks, divd., Northwest to: Sunflowerseed oil, crude, f.o.b. Min-	1 60.00	65.00
neapohs	15	la .16
· a.p.a., run-or-pile, bulk, c.f.		
Fla unit-ton bulk, gran., c.i , Fla ton	275	3.05 165.00
والمراجع والمراجع والمراجع والمراجع والمراجع	100.00	100.00
Talc, dom., grd. New York bgs., c.l.,		
works. ton 99.5%, 325 mesh, bgs., c.l.	84.00	_
works	84.00	90.00
works ton Taic, dom., 99.5%, 400 mesh, mi- cronized bgs., c.l., works., ton		
940 (11881), Micronizad, bas	187.00	238.00
c I., works	200.00	-
workston ord., Vermont, off-color grd., bgs.,	90.00	-
C.I., WOOKS too	136.00	_
imp., Canadian, grd., bgs., c.l., workston	70.00	B4.Q0
works, frt. squald	90.00	
I All Oil, 1610 SCIO, SEMA hauls th	.31	100.00
dist., tanks, same basis	.19	.23
works, I/I. equald 1b less than 2% rown acid to	.201 <sub>2</sub> .22	.231/2
· TOPOW (500 Oils, Fats & Wayna marke) re	port.)	.27
Tallow, fatty acids, tech., non-ret.	.37	.40
tanks, civd	29	45
DIVO 45	.37	33
tanks, divd	.35 8.50	42 9.50
Italian, dms kilo Tankaga, arumal leeding, 9-11%, NH,	52.90	-
CHEST FOR DURK	5.50	-
Tankage, fert, grade (see Nitrogenous pr Tannic acid, NF, fluffy, bbls 1,000-lb.	ocess tani	<8ge).
lech powd das	6.09	-
	4.62	-
works	1.40 1.59	=
Tartanc acid, NF, bos.	1.87	_
Terunium, metallurgical, fo b works lb. Terpin hydrate, NF, Imp., cryst., powd	1.20 12.00	1.50
OD AND ORUMS, LOD Ship of		
Terpineol	1.35 1.10	1.50
onne dos b.	2.40	1.00
	1.35 4.50	2.05
Tetrachioroethylene, USP, dms. c.L.	ethylene).	
ti, works. ib. Tetraelhyl orthospicate, bulk, f.o.b.	.3014	-
works. Tetraethylene glycol, lanks, fri. alki. ib.	1.53	1.66
Tetraethylene glycol diacrylate, t.i. dms , i.o b, works, b. Tetraethylene glycol diacrylate, t.i.	.67	-
"" " " " " " " " " " " " " " " " " " "	1.50	-
basisb. Terraethylthuram disulfide, tech	1.70	1.75
	-68	2.07
Tetrahydrofuran dms., ci., ti., fob.	1.02	
Tetrahydrofurfurvi alcohol tanke Lo b	.96	-
	.90	_
Tetrahydrolinafool, syn , dms	7.20	-
Tetrapotassium phosphata (***********************************	. <b>85</b>	
totrahonie t	Pyropho	etrabasic). Sphate,
That:um metal, dvd. That:um metal, dvd. That:um suitate, 99%, bots., dvd. kilo	35.00	_
Theobronine bus Lob works kilo	40.00 40.00	150 00
dms. 10.000-lulo lois		150.00
	12 00	12.95
Thiaming monophysics uses 100 to the	33.00	-
Throdiphonol, 98% dms. Lob	33 00	-
	3.35	-
Thellavin green toners, molybdated, PMA dms. ib.	5.40	6.05
Thiogiveolic acid, reld, dime, top late	5.60	5.05
	2.07	-
reds. dms , frt, aild	7.50 5.88 ·	6.12
Thionyl chloride, high-purity, 99.6%, 24.000-lb, nin. t.l., dms. frt.		U-12
oquald	.55	-
60 CHEMICAL MAD	א ליוויקו א	O DE

Ξ	Thorium nitrate, purif., dms., 100-li	b.		Turmerlo, Alteppey over 6%
	lots or more, works	b. 2.75	-	Turpentine, crude sulfate tanks
	di-Threonine, drus 10 kilos wkskk Thyme leaves, French, bgs li		-	Southeast works
	Spanish, bgs	o75	-	
	NF, white, dms	o 22.00	_	
	Thymol, NF	). <b>3.7</b> 5	6.15	
	Works	52.30	58.20	
	Tin metal (NY composite)	). N.A	. <b>-</b>	
	ton lots, frt. alld	77	.79	Ultramerine blue pigments, 650- iblots, works
	sturry shipments, 50-ton lots, dry ba			violet, same basis
_	Titanium dioxide, rutile, reg., bas., 20	-	-	Umber pigment, burnt, America
	ton lots, frt. alld	81	.84	raw, American, dom., bgs.
	dry basis, irt. sild	. A4	_	Same Desis
	Non-chalking rutile material costs 1 c. Titanium hydride powd. electronics	ber borng i	more.	j Urea, 46% N, ind., bulk, Guif (
	crede.dmsh	26.50	_	50-ton c.l
대선 88	Titanium tetrachioride, tech., bulk, c.l., f.o.b. works	30	.35	Guif Coast, granular 46% N. agricultural, t.o.b. Midwes
	200-gal cylindera c.l., same basis (b.	50	-	nais,granular
	Tranium sponge, 99.3%, fiber drums, less than 5,000 lbs. f.o.b.			Uva-Ursi leaves, bls
	wks lb. Tobias acid, 2,000 lbs. or more lb.	4.85	-	
	i 0-4-Tocopherols, 67%, dms kilo	2.45 50.08	-	138
	d-a-reception acetale, 81% conc.,			l <b>V</b>
	dmskilo d-a-Tocopheryl acid succinate, cryst.,	57.49	-	<b>.</b>
	drns kilo di-a-Tocopherol, drns kilo	78.44 27.40	-	
	I Ol-8-1000000001 acetate, USP 50.ki/s	27.40	-	Valerian root, Belgian, bgs
	dm. 1000 kilo min kilo. 50% dry powd. 50-kilo dm kilo	16.00 17.00	18.50	indian.bgs. Vanadium oxytrichloride, 3,00
	I ON Daisam, cas	7.80	8.58	CYI9., WOrk8
	Toluene, petroleum, Ind. or nitration, tar Atlanta, Ga., divdgal	nka .70		Vanadium pentoxide, tech., gran., of V <sub>2</sub> O <sub>5</sub> , 550-lb. dms., work
	I Bayonne, N.J., divd asi	.70	Ξ	fused or flake, per lb. V <sub>2</sub> O <sub>11</sub>
	Baytown, Tex., I.o.b. gat. Chicago, III. divd. gat.	.70 70	-	Vandyke brown hars 11 in agus
•	Crainton, Pa., Lo.b	.70 .70	-	Vanilla beans, Madagascar Java, tins
	Oser Park, Tex., f.o.b gat. Ft. Wayne, Ind., divd gat.	.70 .70	-	Yariilun, USP, ding., f.O.D works ,
	Cult Coast, apot, barges nai	.67	_	Imp., dma Versinof Ag
	Houston, Tex., divdgal. New Jersey Metro, divdgal.	.70 .70	-	vedvery/acetate, dms
	POWEGOIDONE, Pa., dlvd	.70	-	extra Vetiver oil, Bourbon, dms
	Providence, R.I., divdgal. Toluene di-isocyanete (mixed isomers),	.70	-	Chinese
	9070, 2,4- BNO 20% 2.6- MONAYS			Haitlan
ı	jumbo tankcars, divd ib. p-Toluanesulfonamide, powd., dms.	1.01	-	VICTORIA DILLA CONTRE, MOIVIDIDATED
ı	Lil., WORKS	3.55		dms tungstated, PTA, dms
١	m-Toluidine, tech., bulk kb. o-Toluidine, tech., liq., dms. c.l lb.	3.10 .72	- .75	I YITIYI ACATATA MONOMAR, LAnks, dh
	bulk, same basis	.60	.64	Vinyl chloride monomer, pol- grade, tanks, f.o.b. works.
ı	Cr., WORKS III	1.80	1.85	Vinyl ether, USP, anesthesia, 7 bots, hospitals.
	Liq., tanks, same basis	1.70	-	Z-VINYIDVIQIJA (.l., dms., works
	TONICUMBS. MIXEO C.M.D. IECH Maula	1.95	-	
۱	bulk same hade	1.03	-	Vinyitoluene, bulk, f.o.b. Vitamin A, synthetic, dry, pharm, 50
ı	O TO STATE OF THE PARTY OF THE	.95	-	A units per gm., 50-kilo. lots Vitamin A, iq. in oil, pharm., 1,000,0
ı	Cincinneti Orioib. Tonka beans. Angostura. prime.	2.90	-	units per gram, 10 kilo lots. Vitamin A, feed grade, 650,000
1	r.cocolb. lots	6.50	_	I Derom
Į	Toxephene, dms., c.i., t.l., workslb. Tragacanth gum, No. 1, ribbons, cns. lb.	.38 36 00	40.00	Vitamin B, (see Thiamine hydroch Vitamin B <sub>12</sub> (see Ribot
1	flaked powder lb. Triacetin tanks, divd. E fb.	12.50	15.00	I VICE/IND Dip. CIVSt., DOD-Starile
1	Tributyi Cilifate, 1.4., drums, f a h	.75	-	(Cyanocobalamin), viais,
I	worksib. Tributyl phosphate, tanks, worksib.	1.70	_	I VII ATTITUDE 17 TO INTERPRETATION OF COURT
1	i i i i i i i i i i i i i i i i i i i	1.65 1.39	1.77	(cyanocobalamin USP) with o
1	tanks, same basis	1.33	_	I YILDIDID DO. U.1% INILITATION OF A
1	OMPS CLION WARES IN	.94	_	B <sub>12</sub> (cyanocobalamin USP) mannitol, 25-kilo, dms.
ı	USP, 100-lb. dms., frt. equald b. 1,2,4-Trichlorobenzene, pure, tanks,	.991/2	-	Vitamin B <sub>1</sub> , cobalamin concentrate with mannitol. 1,000 mcg.
۱	UIVO	.61%	_	
ľ	sumers divi			Vitamin B <sub>17</sub> , 1% Vitamin B <sub>17</sub> , USP sorbad on resin, 5-kilo dms.,
I	"" " " " " " " " " " " " " " " " " " "	.40%		I SUBINICIS, IZT AND DAZ GRAMA
1	Trichloroethylene tanks clad	.42 3914	-	NF, absorbed on resin 5
1	THE POST OF THE PO	.38½ 1.25	Ξ	
l	Trichlorophenoxyacetic acid (see 2,4,5-T) Tricholine clirate, 65%, soln., non-ret.			Vitamin B <sub>12</sub> , 1% cyanocobalemi gelatin, 2.5-kilo dms
	SIDS 1.3UK-ID Into alba III.	1.35	-	Vitamin C (see Ascorbic acid)
ı	Tricresyl phosphate, tanks, f.o.b. worksb.	1.60		I YILDIIIVILYISBA CINOLOGUIAIJORON
	divd.		1.76	Vitamin E (see e-Tocopheral and M
	THE PROPERTY OF THE PROPERTY O	.57 .35	.37	1 *'(4)
1	Triethanolamine jaury sulfate tanks	.35	.37 .37	Violet methyl toner (see Methyl viol
l		.2714	.271/2	
1	Puke same basis	1.33	- 72	<b>18</b> /
l	Curalle L. Million IAL	1.20	-	v
l	Trigitivi phosphate tonks at a	1.82	- !	
l	THE CONTROLL COLOR PARKS FAR ALL IN	1.15 .47	-	Wheeler & Const.
l	f.o.b. works			Warfarin 0.5%, dms., ton lots, frt. a New York or Chicago.
l	TO TO MEDICAL TURNS Prople (c)	.291/2	-	TTT COLUMN TO CONTACTOR
١	equald	.35 1.43		Cold-processed White precipitate. USP, powd., 100
	Tri-Iso-tolyi irimelitate, f.o.b. works b. Tri-Isobutylene, tanks, divd. b.	.51	1.45 .55	
ľ	······································	-45	-	Wintergreen of aug. (200 Mars)
	Trimethylamine annual toolse is.	.671/2	_ 1	TYTICAL LIBEZBI DAIRK IND
ı	equald, 100%, tanks, Iri.	.54%	_	400 mesh, box of works
	hage		-	high aspect rate base west
	basis	.631/2	-	high aspect ratio, bgs., works Wolfastonite, t.l., 1.o.b., produc
ľ	Inmelhylolpropagebos cl. s.l.di.ed.	.581/2	.57	325 mesh
1	""""""""""""""""""""""""""""""""""""""	.73	- 1	400 mesh
١.	Inpenieervingiol tecks (et alle e le	1.50	- 1	Wool greese 1199/con Landin
۱ ٔ	buciti Citatanata awa 11 1".	1.00	-	
	fripropylene olycol tanks fri ald	1.64	.78	Warmwood oil, cns.
		.64	_	V
١.	I works		ľ	V
֓֞֞֜֞֜֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֡֜֜֓֓֓֓֓֡֜֜֓֓֡֓֡֜֜֓֓֡֡֓֜֓֡֡֡֓֡	Tryplophan dime 25 kilo lote in phosphi	ite, tribasic	, - <u> </u>	
1	Ling of tanks Imp Alms, Va. 4	62.00 e	5.00	<b>1</b>
	8.000 lbe morte		.33	Yanihan
1	urmeric, Alterprey 5%	12.85 .66	<u>-</u> 1	Xanthan gum, food 300-lb. drss., i.o works
			- 1	Mark Land Control of the Control of

2.75 8.00	=	Turnerle, Alleppey over 6% lb. Turpentine, crude sulfate tanks, f.o.b. Southeast works gal.	.69 .70	- .80
1.45 75.	-			
0.00 2.00	-			
3.75	6.15	l <b>u</b>		
2.30 N.A.	56.20 -			
.77	.79	Ultramarine blue pigments, 650- 2,000 iblots, works ib.	1.30	
.78	-	violet, same basis	2.20	-
.81	.84	raw, American, dom., bgs., I.c.i.,	.1312	.16\2
.84 . w.d r	nore.	same basis	.131/2 2.70	.1434
.50	-	Urea, 46% N, ind., bulk, Guil Coast. 50-tonc.lton 46% N, agricultural, barges, I.o.b.	200.00	-
.30	.35	Gulf Coast, granular ton 46% N, agricultural, f.o.b. Michaest termi-	76.00	80.00
.50	-	nals, granular ton Uva-Urai leaves, bis	100.00 22	-
85	_		- 66	
45 08	-	<b>  M</b>		
49	_	V		
44	_			
40	-	Valerian root, Belgian, bgslb.	.65	.85
00 00	18.50	Vanadium oxytrichloride, 3,000 ib.	.45	-
30 TO	8.68	Cyls., works	5.40	-
70 70	Ξ	of V <sub>2</sub> O <sub>5</sub> , 550-lb. dms., works lb. fused or flake, per lb. V <sub>2</sub> O <sub>5</sub> , 550-lb. dms., works lb.	4.10 3.36	4.94
0 0 0	Ξ	Vanilla beans, Madagascar lb	3.35 .27¼ 37.00	3.65
0 0	=	Vanillin, USP, dms., f.o.b works ib.	27.00 6.25	30.00
7 0	Ξ	versinof Ag	4.75 .64	5.00
Ŏ	-	extra kio	60.50 63.00	:
Ŏ	Ξ	Chinese	49.00 18.00	-
t	_	Haitian ib. Java kilo	26.50 34.00	-
5	_	Victoria blue toners, molybdated, PMA dmsib. tungstated, PTA, dmsib.	6.20	6.30
	- .75	Vinyl acetate monomer, tanks, dvd. ib. Vinyl chloride monomer, polymer	10.40 .39	-
)	.64	Vinyl ether, USP, anesthesia 75-cc	.28	-
	1.85	2-Vinylpyridine I., dms. works kilo	1.56 7.81	-
i	-	Vinyltoluene, bulk, f.o.b.	7.61 .67	731/2
	Ξ	A units per gm., 50-kilo, lots, kilo	33.00	-
)	-	Vitamin A, iq. in oil, pharm., 1,000,000 A urus per gram, 10 kilo lots kilo	41.00	_
) 	-	Vitamin A, feed grade, 650,000 units per gm. kilo. Vitamin B, (see Thiamine hydrochloride).	18.70	23.85
	40.00 15.00	Vitamin B <sub>12</sub> (see Riboflavin an Vitamin B <sub>13</sub> , cryst., non-sterie, USP	d Yeast).	
	-	Gram, lots.	8.00	9.75
	_ 1.77	(Cv800cohalamin LISDs with dispar		0.10
	Ξ	clum phosphate, 25-kilo dms. kilo. Vitamin B <sub>12</sub> , 0.1% trituration of cryst.	10.75	12.75
	_	B <sub>12</sub> (cyanocobalamin USP) with mannitol 25-kilo. dms kilo. Vitamin B <sub>12</sub> . cobalamin concentrate NF	15.80	_
V2	-	Orem dee	10 45	
<b>5</b>	-	sorbad on resin, 5-kilo days, 500.	19.45	-
/ <del>2</del>	-	Vitamin B <sub>12</sub> , 1% cobalamin concentrate	15.65	-
/2	-	ding fet allet per crem methy	15.40	_
	-	gelatin, 2.5-kilo dms (r)		-
	-	Vitamin C (see Ascorbic acid). Vitamin D (see Cholecald)	15.40	-
	1.76	Vitamin E (see a Toccobard and Fishliver oils).		
	_ .37	Vitamin H (see Blotin). Violet mathyl toner (see Methyl violet toner		
	.37	- 1 Inditional Arrial Arrial folish	,	
4	.27V2 -	1A <i>1</i>		
	-	l VV		
	-			
5	-	Warfarin 0.5%, dms., ton lots, frt. alid. New York or Chicago ib.	.75	
•	_	Cold-processed gal.		7.50
	1.45 .55	dms. to b works		1.24
	-	Wintergreen of sun (near Martin)		
ż	-	feaves, bis	1.35 1.75	<u>-</u>
2	-	325 mesh hop of works ton 1;	34.00 17.00	: I
2	-	Wolfastonite, t.l., (.o.b., producing	34.00	-
2	.57 -	325 mesh	00.00 10.00 14	1.00
	-	1250 mesh	30.00 30.00	=
	70	Wormweed oil (see Chenopodium oil, NF) Wormwood oil, cns	31.00	_
	.78	V		
	_	Y		
esic) 6	5.00	<b>A</b> .		1
_	.33	Washington		
		Xenthen gum, food 300-lb, days, 4 a.b.		

- 1	Xylene, petroleum, ind. or nitration, tanks		-
ſ		7812	
		7612	•
			•
- 1		.7612	-
		76%	
		761	
		.7612	
	Ft. Wayne, Ind., divd gal.	7612	•
	Guil Conel soot borner gal	76%	-
- 1	Guil Coast, spot, barges gal.	75	:
<b> </b>		76%	fi.
		7012	•
		.7612	-
- 1			
- 1		1.38	
		1.42	
- 17	m-Xylene, high purity, tanks, f.o.b.	1.37	
	Texas City Toy		
1.	Texas City, Texb.	.36	
- 1 3	D-Xylene, tanks, worksb.	.125	٠
- 1 :	o Xylene, tanks, divd	.195	.145
_ J '	""- Ayloliduldulling, OMA II (AL	.100	•
	WUIKS	1.70	
- 1 3	-,nyildiile, tech., IId., Cl. 11 fob	1.70	-
	WOORS.	1.50	
- 1 2	NYINGKIUS, ITIIXEO, O-M-D. Alme al al	1.00	-
1	1.0.b. works b.	4.44	
1.		1.00	-
-15			=
- 1			
1	W		
1			
1			
1.			
13	ara yara, 25-ib. cnsib.	2.01	
13	(649) DUIS brower a debutered his o	2.81	•
	east, pure brower, s debiltered, NF, Sac- charomyces, I.I., I o.b. works . b.		
	CIRCUITIVERS 11. 10 h works in	1.10	
	Corba comba language by	1.10	
	erba, santa leaves, bis b.	2.40	:
þ	extra, bots	2.40	n.
þ	erba, santa leaves, bis b.	2.40	31.75

	Z		
	<u> </u>		
	فنيستن بسيابيس بيساوسة		_
	Zein, bgs., 2,000-lb. lots ib.	7.50	93
	Zinc acetate, NF, dms	100	ij
	tech., dihydrate, bos., t.f., works, ib.	1.60	-
	Zinc borate, toch., 43% ZnO, 37%		
	B <sub>2</sub> O <sub>3</sub> , 50-lb, bgs., 20,000-lb, t.l.		
	1.0.D. works	.55	
	cryst., 37% ZnO, 49% B <sub>2</sub> O <sub>3</sub> , 2504b.		
	I dmg 20.000 lbs. t.l. (.o.b. wks. lb.	.89	
	Zinc chloride, USP, gran., dms, kilo	9.79	-
	Zinc chloride, tech., soln. 60%,		
	lanks, f.o.b. Cleveland,		
,	Ohio 100 lbs.	20.20	-
	Concord, N.C 100 lbs.	20.20	-
	Freeport, Tex 100 bs.	20.20	•
	Old Bridge, N.J 100 lbs.	20.20	•
	65 degree, same basis Clevoland,	07.00	
	Ohio 100 fbs.	27.90	•
	Concord, N.C 100 lbs.	27.90 27.90	
	Old Bridge, N.J 100 lbs 70 degree, same basis Cleveland.	27.30	_
	ONA 100 to	29.70	
	Ohio 100 lbs. Cancard, NC 100 lbs.	29.70	
	Old Bridge, NJ 100 lbs.	29.70	-
	72 degree, same basis Cleveland	23.10	
	Ohlo 100 lbs.	33.20	
	Concord, NC 100 lbs.	33.20	
	Old Bridge, NJ 100 lbs.	33.20	-
	Zinc chromate, bgs., divd lb.	1.12	
	Zinc cyanide, dms., c.i ib	1.65	214
	Zinc dust pigment type 1 & 2, dms., c.l.,		67
	lo.b. plantb	.59	Ď,
	Zinc ethylenediamine tetracetic acid,		
	8.4% Zn., ammonia sali son	.56	
	I.c. t t., f.o.b. works lb.	.20	-
	9% Zn., ammonia salt soin., t.c., t.t.,	.48	
- 1	1.o.b. worksb.	.40	

Zinc oxide photo conductive, bgs., cl., Industrial grade
Zinc resinate precip. 7.2-7.6% Zn.
dms., frt. alid. . . . b.
Zinc silicofluoride, dms., c.l., t.l.,
jb. 

Zinc sulfate, gran., monohydrate, in-dust, grade 38% Zn., bgs., ct., works. 100 lbs. 

US imports of chemicals and related materials are reported in this section by CPI material. Listings include consignee where possible, container, net weight, name of vessel (in parenthesis), port of origin and date of shipment's arrival in New York or the Port of Newark.

US chemical imports/exports are tabulated monthly in the market reports.

ICETYL CHLORIDE Pan American Container 62 dms (30784 lbs) (Allantic Compass) Liverpool, 10/20.

IORILAMIDE Drew 480 bgs (27701 lbs) (Ming Moon)

Kobs, 10/13.

IORICACID 1280 bgs (71958 lbs) (Tutova) Conatanza,

10/17. 10/18 Pemy 20 dms (2205 lbs) (Act 2) Auckland, 10/17. TcGums 20 dms (2399 lbs) (Ever Globs) Osaka, 10/17. Altrasport 50 dms (6063 lbs) (American Georgia) Roi-American Shpg 440 bge (25415 lbs) (Lircay) Valparalso,

10/16. CGM French Line 450 bgs (39979 lbs) (Atlantic Companis) LeHevre, 10/14. Harold Pepper 37 bgs (Stuttgart Express) Harnburg. AUGHYDE C-17 Votainer Consolidation Servi 1 dms (1218s)(Stutigart Express) Rotterdam, 10/15, AUGHNAM OXIDE Rhone Poulenc 114 dms (43730 lbs)

(Liberly) Merseille, 10/14. Pantipne 4 bxs (961 ibs) (American Georgia) Bremer-Agico 95 dms (40040 lbs) (Stuttgart Express) Hambug. 10/15. Treacher 96 dms (40040 lbs) (Stuttgart Express) Bre-

mehiwen, 10/15. US Browse Powder 70 dms (45150 lbs) (Stuttgart Ex-press) Dublin, 10/15. retacher (750 bgs (197201 lbs) (Dart Continent) Bremeriteren, 10/8. 9 das (40040 ibs) (Dart Continent) Bremerhaven, 10/

rebacher 192 dms (60080 lbs) (Dart Britain) Breimer-Native Asphalt 180 dma (44842 lbs) (Allentic Com-pas)(Edhenburg, 10/20. 160 dms (44842 lbs) (Atlentic Compass) Gothenburg.

ACCOMPTE 14 Ink (36420 lbs) (Stutigari Express)
Artasp. 10/15
Artasp. 10/15
Artasp. 10/15
Artasp. 10/16
Artasp. 10/17
Artasp. 10/16
Artasp. 10/17
Artasp. 10

Cotomby Legiontri, 10/20.

SL Louis Futh 480 bgs (28455 lbs) (Export Freedom)
Attandra, 10/12.

So M 500 bgs (22048 lbs) (Export Freedom) Alexandra, 10/12.

Mate. 10/12.

Mate. 10/12.

Mate. 10/12.

ATLEAVES Louis Furth 412 crt (7652 lbs) (Valiant) izmir.

10/18.
E-MOT, PEROXIDE Agricham 209 dms (21666 lbs)

COUNT. PEROXIDE Agrichem 209 dma (21666 lbs)

(Mestemarech) Felixatowe, 10/18.

SCALC/ANDE inter Maritime Fwdg 1 lnk (43211 lbs)

STANDROXYNAPHTHOIC ACID 169 dms (33832 lbs)

AUM SUBSALICYLATE Itac Freight Service 80 dms
(S148 bs)(Allanius Service) LeHavre. 10/15.
(S148 bs)(Allanius Service) LeHavre. 10/16.
(S158 bs)(S148 bs) Rotterdam, 10/16.
(S158 bs)(S148 bs)(Dart Continent) Bremerhavn, 10/8.
(S168 bs)(Stuttgart Express) Hamburg, 10/16.

ing Liftippone Atlas Intermodal Transport 230 (1983) has (Ming Moon) Yokohama, 10/13. (1984) dns (13547 lbe) (Laura Maersk) Tokyo.

All Carlotte H M Royal 4820 mix (246375 pt.)

Saladrani Minole) Kobe, 10/14.

July Ruoribe North American Philips Light 64

10/18/20 Rep (Lura Meersk) Kobe, 10/16.

Saladrani Trog 22 bgs (2227 lbs)

Saladrani Trog 22 bgs (2227 lbs) 11 250 bgs (33620 lbs) (Laura Maers)

am 2 bks (2204600 lbs) (Quinca) Sal-

sik as)(Shoun Universe) Bangkok, 10/19, 3bsi (Ming MALEATE Davos Chemical 2 058 (Ming Moon) Kobe, 10/13. ora)Corellanza, 10/9.

CIMETIDINE Panalpina 32 dms (1927 lbs) (American Georgia) Bremerhavan, 10/12. CINNAMON inti Brokers 26 bgs (2282 lbs) (Atlantic Com-

pore, 10/14, CINNAMON QUILLS Linvingston Mutual 88 bis (6808 lbs)

CINNAMON QUILLS Linvingston Mutual 68 bis (6808 lbs)
(Laura Maersk) Singapore, 10/16.
CITRIC ACID Amalgamated Metal 1400 bgs (78319 lbs)
(American Illinols) Kobe, 10/14.
CITRONELLA OIL Polarome Mfg 57 dms (24881 lbs)
(American Illinols) Hong Kong, 10/14.
CLAY Dan Transport 450 bgs (49804 lbs) (Westermarsch)
Antwerp, 10/18.

CLOVE 51 EMS William E Martin 64 pgs (3097 lb8) (Laura Marsk) Singapore, 10/16.

COAL TAR INTERMEDIATES Montedison 188 mix (26058 lbs) (Liberty) Leghon, 10/14.

350 crt (42357 lbs) (Colombo) Genoa, 10/20.

COBALT Unimodal 75 dms (14504 lbs) (Dart Britsin) Felixstows, 10/15.

lixstowe, 10/15.
COCONUT OIL SFIC Alcan 2 bks (2204600 ibs) (Shoun

Universe) Colombo, 10/19.
COD LIVER OIL Twin Laboratories 76 dms (35168 ibs) (Husum) Rolterdam, 10/10
COPPER SULFATE Calabrian Intl 750 bgs (37644 lbs) (Sania Rosa De Lim) Caliao, 10/15 CORIANDER CGM French Line 1180 bgs (119049 lbs)

CORIANDER COIN Franch Line 1100 ogs (119049 ibs)
(Atlantic Companio) LeHavre, 10/14.

CORIANDER SEEDS Ludwig Mueller 625 bgs (55115 ibs)
(Valiant) Constanza, 10/18.

Transit Trdg 1260 bgs (11023 lbs) (Valiant) Constanza,

10/18. CREAM OF TARTAR Vio 720 bgs (80159 lbs) (Liberty) Valencia, 10/14
CYANURIC CHLORIDE Lonza 320 dms (40071 lbs) (Stutigart Express) Bremerhaven, 10/15, 320 drs (40071 lbs) (Stutigart Express) Rotterdur

DEXTRIN ADHESIVE Pan American Container 9 dms (1493 ibs) (Anierican Georgia) Rotterdam, 10/12. DEXTROSE J H Bachmann 132 ctn (2895 ibs) (American

Georgiai Bremerhavan, 10/12. Roguetta 420 bgs (42306 lbs) (Atlantic Service) LeHavre, 10/15.

LeHavre, 10/15.

DI-N-BUTYL ETHER Wacker Chemiads 76 dms (29489 lbs) (Rouen) Bremerhaven, 10/16.

DIAMINO DIPHENYLAMINE SULFONIC ACID Bemo Slipg 30 dms (9729 lbs) (Ming Moon) Kobe, 10/13.

DIANISIDINE DIHYDROCHLORIDE Nagase America 190 dms (31535 lbs) (Ming Moon) kobe, 10/13.

DICHLOROBENZIDINE DIHYDROCHLORIDE Mitsui 80 dins (24037 lbs) iMing Moon) kobe 10/13.

dris (24037 ibs) (Ming Moon) kobe, 10/13 DICYANDIAMIDE 1600 bgs (89595 ibs) (Husum) Rotter-

dom, 10/10. DIETHYL MALONATE 360 can (50794 lbs) (Tutova) Constanza 10/9.
DIETHYLENE TRIAMINE Leschaco 2 ink (84745 lbs)

(Husum) Rotterdam, 10/10. Berol Chemical 42 dms (18982 lbs) (Atlantic Companio) Gothenburg, 10/14. DIMETHYL SULFOXIDE 2 con (85627 lbs) (Ever Shine)

Fos, 10/19.
DIPHENYLMETHANE DI-ISOCYANATE Pat Products 2 pit (4675 lbs) (American Goorgia) Falkstowe, 10/12. DISODIUM PHOSPHATE Daruma Shpg 720 bgs (41998 lbs) (Hanjin Kobe) Keeking, 10/11.

ENZYMES Novo Laboratories 444 dms (74788 lbs) (Sea Land Developer) Bremerhaven, 10/10.

EPOXY RESIN Atlas Intermodal Transport 720 bgsd (43122 bs) (Hanjin Kobe) Busan, 10/11.

EPSOM SALTS Potash Import & Chomical 800 bgs (793486 bs) (Dart Britain) Bremerhaven, 10/15.

ETHYL ACETATE ICO Ind 1 bks (925932 lbs) (Quinca)

May & Baker 1 bks (452527 ibs) (Ouinca) Santos, 10/ 19.
ETHYL ALCOHOL New York Cosmetic 4 pit (5871 lbs)
(Dart Britain) Felixatowe, 10/15.
ETHYLENE GLYCOL ACETATE Chemitest Chemical 1
bks (1102474 lbs) (Quinca) Santos, 10/19.
EUCALYPTUS OIL 2 drns (870 lbs) (Act 2) Sydney, 10/17.
FENNEL SEED Spice Mill 480 bgs (52910 lbs) (Export
Freedom) Alexandria, 10/12.

Freedom) Alexandria, 10/12. FENUGREEK SEEDS 400 bgs (44092 lbs) (Vallant) Izmir, 10/18. FISH OIL 80 dms (36885 lbs) (Husum) Hamburg, 10/10. FLUORINATED RUBBER Montedison 128 dms (6482 lbs)

(Colombo) Lephom, 10/20. FLUROANILINE Ofin 10 dms (5512 lbs) (Dart Continent) Felixstowe, 10/8. Graymor Chemical 1242 bgs

FRUCTOSE Graymor Chemical 1242 bgs (86538 lbs)
(Westermersch) Antwerp, 10/18.
FURAZOLIDONE Panalpina 400 dms (19290 lbs) (American Georgia) Bramerhaven, 10/12.
GELATIN Blue Anchor 18 dms (2143 lbs) (Bluttgart Express) Greenock, 10/16.
GLYCOL ETHER Chemilest Chemical 1 bks (694403 lbs)
(Quinca) Santos, 10/19.
GUM ARABIC Colloides Naturels 360 bgs (40476 lbs)
(Atlantic Compass) LeHavrs, 10/2.0
GUM ROSIN Atlantic Air Express 440 bgs (49229 lbs)
(American Georgia) Rotterdam, 10/12.
HEPTANOIC ACID 1 bks (1102117 lbs) (Shoun Venture) L.
Avera, 10/21. Avera, 10/21.

IYDROFLUORIC ACID BDP Inti 66 dms (36728 jbs) (Zm Savannah) Osaka, 10/17. HYDROXYCITRONELLAL BASK K & F.70 dms (2986) ibs) (Stuttgart Express) Antwerp, 10/15.

Fallx stowe, 10/15.
ISOTRIDECYL ALCOHOL 1 bks (1102271 /bs) (Quinca) Santos, 10/19.

J ACID Penson 272 dms (34480 lbs) (American Illinois) pass) Liverpool. 10/20. Max Van Pels 30 cs (2892 lbs) (American Illinois) Singa-

Kobe, 10/14.

Kobe, 10/14.

Kobe, 10/14.

LACTIC CASEIN New Zeeland Milk Products 613 bgs (14.176 lbs) (Westermarsch) Bremen, 10/18.

LANOLIN OIL 80 dms (38,095 lbs) (Ming Moon) Kobe, 10/13. LEAD NITRATE Panaipina 1 bxe (1.133 ibs) (American

Georgia) Bremerhaven, 10/12. LIME OIL EL Scott 8 dms (3,629 lbs) (Santa Ross De Lim) Antwerp, 10/18.
CLOVE STEMS William E Martin 84 bgs (5697 lbs) (Laura Callac, 10/15.

Caliao, 10/15.
Fritzscha Dodge & Olcolt 12 dms (5,384 lbs) (Santa Rosa De Lim) Callao, 10/15.
9 dms (4,060 lbs) (Sania Rosa De Lim) Callao, 10/15.

MAGNESIUM BULFATE Exim Line 160 bgs (8,959 ibs) (Hanjin Kobe) Kobe, 10/11.

(Hanjin Kobe) Kobe, 10/11.

Ocean Contract Carriere 700 bgs (39.198 ibs) (Hanjin Kobe) Kobe, 10/11.

MALEIC ANHYDRIDE Huels 720 bgs (40.962 ibs) (Rouen)

Rollerdam, 10/16.

MENTHOL American Import Service 22 dms (249 lbs) (American Georgia) Rotterdam, 10/12. Berje 40 dms (2.557 lbs) (Stuttgart Express) Hamburg.

F X Coughlin 40 dms (2,601 lbs) (Atlantic Compass)

METHANOL Panelpine 2 bxs (40 lbs) (American Georgia)
Bramerhaven, 10/12.
METHYL METHACRYLATE Deguesa 1 lnk (40,499 lbs) METHYL METHACRYLATE Degussa 1 Ink (40,499 lbs)
(Stuttgart Express) Bremerhaven, 10/15
METHYL RESORCINOL Accelerated Shog 20 kgs (2,381 lbs) (Atlantic Compass) Liverpool, 10/20
METHYLHEXAHYDRO PHTHALIC ACID ANHYDRIDE Nox Crete Chemicals 1 dms (150 lbs) (Atlantic Service) Rotterdam, 10/15
MONOCHLOROACETIC ACID Robeco Chemicals 1 link (42,284 lbs) (Atlantic Service) Rotterdam, 10/15

(42,284 lbs) (Allantic Service) Rotterdam, 10/15 198 dms (28,583 lbs) (Stultgart Express) Aniworp, 10/

MONOSODIUM GLUTAMATE National Food Trdg 780

bgs (39,894 lbs) (Laura Maersk) Singapore, 10/18. MUSK XYLOL 270 kgs (31,389 lbs) (Husum) Rotterdam NYRISTYL BROMIDE Leyden Customs Expeditors 8 dms

(3,986 lbs) (Atlantic Compass) Liverpool, 10/20. NICKEL SULFATE Alloychem 800 bgs (40,177 lbs) (Westormarsch) Brenien, 10/18. NICOTINAMIDE Relily Tar & Chemical 800 bgs (44,621 ibs) (Stuttgart Express) Antwerp, 10/15. NITRIC ACID Panaloina 1 bxs (2 bs) (American Georgia)

Bremerhaven, 10/12. N/TROCELLULOSE Lanco M/g 95 dms (34,304 lbs) (See Land Davelope Rotterdam, 10/10.
Fayette Chemical 304 dms (123,782 lbs) (Liberty) Marsellle, 10/14
112 dms (34,456 lbs) (Ever Shine) Fos, 10/19.

Fayette Chemical 136 dms (41.839 lbs) (Sea Land Leader) Algebras, 10/14.

OLEORESIN PAPRIKA EL Scott 20 dms (2,399 lbs)

(Colombo) Cadiz, 10/20. OLIVE O/L Bertoll 14,594 ctn (216,223 lbs) (Colombo). Leghorn, 10/20. Parthenon Intil Packers 9 cs (616 lbs) (American Geor-

gla) Fellxstowe, 10/12. Rienzi & Son 738 cm (26,455 lbs) (Colombo) Naples, 10/20. Bertolli 6,142 crt (66,214 lbs) (American Georgia) Rot-

Berton 6,142 ort (86,214 lbs) (American Georgia) Rotterdam, 10/12.

Goya Foods 1,845 os (46,209 lbs) (Sea Land Leader)
Algeoiras, 10/14.

OREGANO AA Sayis 1,100 bgs (22,002 lbs) (Export Freedom) Istanbul, 10/12.
551 bgs (11,023 lbs) (Export Freedom) Piraeus, 10/12.
Griffith Laboratories 550 bgs (11,001 lbs) (Vallant) Istanbul, 10/18.
Griffith Laboratories 2,200 bgs (44,092 lbs) (Vallant) Izmir, 10/18.

Izmir, 10/18. Herbert Marmorek & Sons 1,760 bgs (S5,274 ibs) (Ex-

port Freedom) Istanbul, 10/12. Krinos Foods 1,100 bgs (22,000 bs) (Vallant) Istanbul, 10/18.

Louis Furth 210 bgs (8,400 lbs) (Vallant) izmir, 10/16. McCormick 1,100 bgs (22,002 lbs) (Export Freedom) istanbul, 10/12. Mincing Troig 580 bgs (11,601 lbs) (Vellent) Istanbul, 10/18.
553 bgs (11,023 lbs) (Vellent) Izmir, 10/18.
Morte J Golombeck 300 bgs (13,360 lbs) (Santa Rose De Lim) Callao, 10/18.

1,100 bgs (22,046 lbs) (Export Freedom) Izmir, 10/12.
OREGANO Schiff Food Products 1,650 bgs (33,069 lbs) (Valant) Izmir, 10/18. (Valant) Izmir, 10/18. Sirob imports 1,200 bgs (24,001 lbs) (Export Freedom)

istenbul, 10/12. McCormiok 2,173 bgs (43,487 lbs) (Export Freedom) Piragus, 10/12.
OXALIC ACID Navtrsinti Freight Fwdg 1,440 bgs (84,877 ibs) (Hanjin Kobe) Keelung, 10/11.

PALM KERNEL OIL Loders Crokisan 764 ctn (43,625 ibs) (Sea Land Develope) Rotterdam, 10/10. 3 bks (2,224,197 lbs) (Shoun Universe) PT Kelang, 10/

19. PAPRIKA AA Sayla 50 bgs (5,640 lbs) (Colombo) Velencië 10/20 AA Sayla 250 bgs (27,694 lbs) (Colombo) Valencia: 10/20. AA Sayla 50 bgs (5.540 lbs) (Colombo) Vatencia, 10/20. November 17, 1986

HYDROXYETHYL PIPERAZINE Berol Chemical 30 dms (14550 lbs) (Atlantic Compass) Gothenburg, 10/20. PARAFFIN WAX Diana Mfg 28 bxs (1,093 lbs) (Stuttgart

Express) Hamburg, 10/15.
Seaguil Trdg 2 bks (4,311,250 lbs) (Quinca) Madre De
Deu, 10/19.
PARAFORMAL DEHYDE TR America Chemicals 640 bgs IBUPROFEN Intermar Steamship 60 dms (7275 lbs)
(Rousn) Lelfavre, 10/16.
INOSITOL Centurion Shpg 80 dms (5185 lbs) (American lilinois) Kobe, 10/14.
karl Schroff 60 dms (3889 lbs) (American lilinois) Kobe, 10/14.

ARAFORMAL DEHYDE TR Amenda Chemicais deu bgs (36,473 lbs) (Liberty) Valencia, 10/14. Lonza 4 dms (494, lbs) (Stuttgart Express) Bremer-haven, 10/15. PENICILLIN Lassen Intl Fwdrs 40 dms (4,026 lbs) (Dart Karl Schroff 60 dms (3889 iba) (American lilinois) Kobe, 10/14, 40 dms (2593 iba) (American lilinois) Kobe, 10/14, 40 dms (2593 iba) (American lilinois) Kobe, 10/14, INSIULIN E R Squibb & Sons 18 pkg (23960 iba) (Atlantic Compass) Gothenburg, 10/20. ION EXCHANGE RESIN Mitsubishi Chemical Ind 81 mix (24187 iba) (Ming Moon) Kobe, 10/13. Sirbon Chemicals 440 bgs (33999 iba) (Ming Moon) Kobe, 10/13. IRON TRISTEARATE Express Consolidation System 167 bgs (5820 iba) (Atlantic Service) LeHavre, 10/15. Continent) Bremerhaven, 10/8.

Continent) Bremerhaven, 10/8.

FC Gerlach 725 ctn (35,273 lbs) (Stuttgart Express)

Greenock, 10/15.

Alltech 12 pkg (745 lbs) (Dert Continent) Felixstowe.

10/8.
PENTAERYTHRITOL Degussa 1.762 bgs (88,876 lbs)
(Dart Continent) Bremerhaven, 10/6.
881 bgs (44,438 lbs) (Stuttgart Express) Bremerhaven,
10/15. Klockner Chamical 800 bgs (36,508 lbs) (Tenglo) Val-

bgs (5820 lbs) (Atlantic Service) LeHavre, 10/15. ISODECYL ALCOHOL 1 bks (1212499 lbs) (Quinca) San-Ios. 10/19.
ISOPROPENYL ACETATE 1 dms (46 lbs) (Dart Britain)

Klockner Chemical 800 bgs (36.508 lbs) (Tenglo) Valparalso, 10/14.
Degussa 500 bgs (22.266 lbs) (Stuttgert Express) Bremerhaven, 10/15.
PEPPERMINT Oil, FX Coughlin 18 dms (7.857 lbs) (Dart
Britain) Felixstows, 10/15.
Lloyd Inti Shpg 1 dms (0 lbs) (Act 2) Melbourne, 10/17.
PHENOXYACETIC ACID Gloc 1 kgs (119 lbs) (Atlantic
Compass) Liverpool, 10/20.
PHENYL 3-PYRAZOLIDINE Dentiel F Young 3 dms (357
lbs) (Atlantic Companio) Liverpool, 10/14.
PHENYL ETHYL ALCOHOL Polarome intl 80 dms (38,977
lbs) (Ming Moon) Yokohema, 10/13.
PHOSPHORIC ANHYDR/IDE 94 dms (44,762 lbs) (Ever
Shine) Fos, 10/19.
PHOSPHORUS OXYCH! ORIDE Coming 64.

HOSPHORIC ANHYDRIDE 84 dms (44,762 lbs) (Ever Shins) Fos, 10/18.
HOSPHORUS OXYCHLORIDE Coming Glass Works 2 cs (234 lbs) (Atlantic Companio) Livarpool, 10/14.
PHOSPHORUS PENTACHLORIDE 360 hob (38,825 lbs) (Stuligari Express) Bremerhaven, 10/15.
(Stuligari Express) Bremerhaven, 10/15.
(THALOCYANINE BLUE Dainichiselka Color & Chemic 400 bgs (20,708 lbs) (Ming Moon) Yokohama, 10/12

POLYBUTENE BP Oil 158 dms (98,985 lbs) (Liberty) Mar-

POLYBUTENE BP Oil 156 dms (96,985 lbs) (Liberty) Mar-solite, 10/14, POLYVINYLIDENE CHLORIDE Piorce & Stevens Chemi-cal 839 bgs (7,399 lbs) (Atlantic Compass) Gothen-burg, 10/20, POPPY SEEDS Horbert Marmorek & Sons 660 bgs (36,376 lbs) (Vallant) Izmir, 10/18, Schill Food Products 680 sks (37,478 lbs) (Vallant) Izmir, 10/18.

IZMIR. 10/18.
POTASSIUM FLUOROTITANATE MILITANS 680 bgs

(38.977 lbs) (Harjin Kobe) Yokohama, 10/11.
POTASSIUM HYDROXIDE Charles A Redden 343 dms (40.001 lbs) (Sea Land Dovelope) Bremerhaven, 10/

Mallinckrodt 336 dms (39.185 lbs) (Allantic Compass) Gothenburg, 10/20.
POTASSIUM PERCHLORATE Nu Tech Chamical Ind 150 dris (41,667 lbs) (Allanic Companio) Gothenburg.
10/14
POTASSIUM SORBATE 390 dms (42,320 lbs) (Rougn)

Rotterdam, 10/15.
'YRIDOXINE HYDROCHLORIDE Centurion Shpg 40 dris (2,469 lbs) (American Illinois) Robe, 10/14.

OUEBRACO EXTRACT Tac Fannin & Chemicals 2 con OUEBRACO EXTRACT Tac Tannin & Chemicals 2 con (78,263 lbs) (Lircay) Valparaiso, 10/16 OUINOLINE Howard Hall Intl 20 dms (9.833 lbs) (Atlantic Sorvke) Rottordam, 10/15 ROSEMARY LEAVES Wilson Group 230 bgs (15,432 lbs)

(Rouen) Rotterdam, 10/16

SAGE LEAVES Herbert Marmurek & Sons 95 bis (11,023 lbs) (Vallant) Izmir. 10/18.
SCHAEFFER ACID Montedison 320 dms (86,068 lbsw) ibs) (Valiant) izmir. 10/18.

SCHAEFFER ACIO Montedison 320 dms (86.068 lbsw) (Liberty) Leghorn. 10/14.

SEBACIC ACID Polyesther 720 ctn (40,088 lbs.) (Ming Moon) Hong Kong. 10/13.

SESAME OIL Summit imports 836 ctn (33,664 lbs.) (Ming Moon) Kobe, 10/13.

SILICA GEL Panalpina 17 bxs (1,016 lbs.) (American Georgia) Bremerhaven. 10/12

SiLICA GEL Panaipina 17 bxs (1,016 lbs) (American Georgia) Bremerhaven, 10/12.

SILICONE OIL Inter Maritime Fwdg 33 dms (16,204 lbs) (Laura Maersk) 764 yo. 10/16.

SILICONES General Electric 58 pkg (38,567 lbs) (Stuttgart Express) Rotterdam, 10/15.

SODIUM AZIDE Pleuss Statifer Intil 11 dms (1,213 lbs) (Mino Mona) Kobe, 10/13.

SODIUM AZIDE Pleuss Stauffer Intil 11 dma (1,213 lbs)
(Ming Moon) Kobe, 10/13.

SODIUM BISULFATE Coastal Ind 2 bgs (243 lbs) (Dari Continant) Antwerp, 10/8.

SODIUM CYANIDE Deguesa 600 dma (130,683 lbs)
(Stuttgart Express) Bremerbaven, 10/15.

John Steer 252 dms (36,389 lbs) (Export Freedom)
Lephorn 10/12. Leghorn, 10/12.

Leghorn, 10/12.

Montedison 252 drns (36,389 lbs) (Export Freedom)

Montedison 252 orns (30,368 lbs) (EXPORT FIREGORIA)
Legiom, 10/12.
SODIUM HEXAMETAPHOSPHATE Organic Specialty
350 bgs (38,735 lbs) (American Minols) Kobs, 10/14.
SODIUM HYDROXIDE Malfinckrodt 336 dms (39,185 lbs)
(Dart Continent) Bremerhaven, 10/8.
336 dms (39,185 lbs) (Atlantic Compass) Gothenburg,

336 dms (39,185 lbs) (Atlantic Compass) Gothenburg, 10/20.
SODIUM HYPOPHOSPHITE Penson 340 dms (40,477 lbs) (Zim Savannah) Yokohama, 10/17.
SODIUM METAPERIODATE AN Deringer 14 crt (3,441 lbs) (Dart Britain) Fefixatows, 10/15.
President Container Lines 10 crt (2,458 lbs) (Dart Continent) Fefixatows, 10/8.
SODIUM PERBORATE Degussa 420 lbgs (42,463 lbs) (Sluttgart Express) Antwerp, 10/15.
840 lbgs (84,928 lbs) (Atlantic Compass) Antwerp, 10/20.

20.

SODIUM PERSULFATE Deguser 720 bgs (39,842 lbs) (American Georgia) Bremerhaven, 10/12.

SODIUM TRIPOLYPHOSPHATE Marubeni America 2,280 bgs (115,711 lbs) (Ever Globe) Tokyo, 10/17.

Browning Chemical 850 bgs (45,161 lbs) (Husum) Harnburg, 10/10.

SORBITOL Nestor Reyes 384 dms (137,151 lbs) (Sea Land Qevelope) Rotterdam, 10/10.

SULFAMETHOXAZOLE Shlonogi 84 dms (10,185 lbs) (Laura Maerak) Kobe, 10/16.

SULFAMETHOXAZOLE Shionogi 84 dms (10,185 lbs)
(Laura Maerak) Kobe, 10/18.

TANTALUM PENTOXIDE Trinitech inti 30 dms (7,539 lbs)
(Act 2) Mebourne, 10/17.

TETRACYCLINE HCL. Universal Transcontinental 201 dms (24,372 lbs) (American Georgis) Rotterdam, 10/12.

THYME LEAVES WE Martin & Sons 280 bgs (30,882 lbs) (Ever Shine) Valencia, 10/19.

TIN OXIDE Alba Fwdg 125 dms (34,722 lbs) (Ming Moon) Yokohama, 10/13.

Magnesium Elektron 130 csk (27,209 lbs) (American Georgis) Felixatowe, 10/12.

TITANIUM DIOXIDE Hempels Marine Paints 240 bgs (13,823 lbs) (Husum) Rotterdam, 10/10 (Lukens Chamical 800 bgs (41,802 lbs) (American Georgis) Rotterdam, 10/10 (Lukens Chamical 800 bgs (41,802 lbs) (American Georgis) Rotterdam, 10/12.

Ni. Ind. 4,000 bgs (207,453 lbs) (Stuttgart Express) Antiwerp, 10/15.

Continued on Page 68. CHEMICAL MARKETING REPORTER

Kanthan gum, food 300-lb. dms., i.o.b.

LARGE BIRDS

(12) 40" x 60" Bird decanter, 316 S/St, 15/3 deg. contour, 5" pitch, single lead conveyors w/Stellite hard surfacing, 80:1 gearbox, 100 HP V-belt main motor drive. New late 60's. Excellent condition. Limited Use. immediately Available from Stock.

(2) 32" x 50" Bird decanter, 316 S/ST, 15/3 deg. contour, 5" pitch, single lead conveyors w/Stellite hard surfacing, 80:1 gearbox, 75 HP V-belt drive. Excellent condition. Limited Use. immediately Available from Stock.

#### WYSSMONT TURBO DRYER

100

17.

Stainless Steel, mdl L-12, steam heated, 48" dia S/ST trays & sides w/heater controls.

### VACUUM DOUBLE DRUM

DRYERS (2) Blaw Knox designed double drum dryers, 18" x 48" & 36" x 120", chrome plated, each w/vacuum chambers & vacuum pump package. Excellent condition. Ready to Ship.

#### WYSSMONT DRYER

Model N-22, 8' dla trays 22 high, with stainless steel contact parts. May be shipped in one piece. Steam heated.

#### **ROTARY FILTERS** Ametek 8' x 12' rotary w/belt

discharge, 316 stainless, new 1974 - Excellent condition. -Ametek 5" x 81/2' rotary w/belt discharge, 316 stainless. New 1974 - Excellent condition.

#### STAINLESS DRYER

Louisville stainless steel steam tube dryer, 8' dia x 40', stainless steel clad shelf w/stainless steel steam tubes.

#### Also Available:

Roto-Louvre mdl 900-32, 9' dla x 32' long, steam heated, 30 HP motor, all fans & Flex-Clean dust

#### CRYSTALLIZER

Titanium contact parts, 8000 ibs p/hr capacity. New 1976. Complete and still installed.

#### RAYMOND ROLLER MILLS

\* \* \* Just Purchased \* \* \* (3) Raymond high side roller mills, model 5057, double whizzer separator, fan; feeder, cyclone, duct work & bucket elevator.

#### LARGE SHARPLES SUPER DECANTERS

(2) Model P8100 Sharples Super Decanter, 316 S/ST, carbide tiles, 250 HP main drive, 126:1 gearbox w/backdrive. New 1979. Complete. Excellent Condition.

### FLUID BED DRYER

Jeffrey fiuld bed dryer, 5' x 20', 304 sanitary construction, complete installation including fans, dust collector, S/ST scrubber &

**EXCELLENT CONDITION** 

### INDUSTRIAL FILTERS

2) Industrial Filter Sysytems, 600 200 sq. ft. each, dry cake discharge, vulcanized rubber lined tank w/316 S/ST filter leaves. completely automated w/computer controlled actuators. Like New Condition

#### **RESIN REACTOR**

(1) 8500 gallon 316 S/Tt reactor, 30 PSI/full vacuum internal. 15 PSI lacket, 45 PSI 316 S/ST colls, 10/15 HP 2 speed turbine agitator, S/ST overhead condenser. New 1977. Still Installed. Excellent condition.

#### STRONG SCOTT SOLIDAIRE DRYERS

Model SJS-24-16, 24" dia x 16' long, 304 stainless, dimple jacket, 50 HP vari drive. Model SJS-20X16, 20'' dia x16' long, 316 stainless steel, jacketed. Model SJS8X52, 8" dia x 52" long stainless, jacketed, pilot size Stainless steel mdl SJS-36-22 w/iacket & 40 HP drive

#### JUST PURCHASED

Link Belt Roto-Louvre Dryer 10'3' x 36' long, md! #1003-36, complete system incl 50 HP drive, firebox w/20,000,000 BTU gas burner, all fans, duct work & controls, multi-cyclone collector & Sly 30,000 CFM baghouse. Excellent Condition -Still installed. We will load - Call for FOB Pricing

### AMETEK ROTARY PRECOAT FILTERS

(1) 2' x 3', T304 sanitary stainless, complete station w/vacuum receiver, pump, mix tank & Nash vacuum pump. Rebuilt. (3) 10' x 16', 316 stainless steel, 100 HP Roots vacuum pumps,

receivers, interconnecting piping, etc. Rebuilt. (1) 3' x 3', string discharge, 316 stainless, Incl S/ST agitated through, vari speed mtr, vari speed dry on drum, 316 stainless

### Sini vacuum pump. Excellent condition. MACHINERY and EQUIPMENT CORP.

P.O. Box 7632-O · San Francisco, CA 94120 Call Toll Free 800-227-4544 - In California Call 800/792-2975 OR 415/467-3400 - Telex 340-212

Patteren & Abbe Caramic-Line (Pathie Mile from 15"x21"+up.
Reliable 6"x12" Two Red Mill, 6 HP.
110 Cu. Ft. C/8 heavy-duty ribbon blenders, 12.25 Cu. Ft., 2 HP.
(2) Lebch 3/8 sankary ribbon blenders, 12.25 Cu. Ft., 2 HP.
J.H. Day "Nauth" Blender, 21, Cu. Ft. 318 8/8, MBX
Votator: (2) 4"x46" L. Tubes, 316 8/8, (6 HP.
Dorr-Giver "Web-Troi" 5"x8" Ret. Vac. Filher, 318 8/8.
Crandel 5-Cal. subsurface weigh-type filer, 8/8, model F-2.
Turbs-Film 1.13 Sq. Ft. Lab evaporator, 318 8/8, 1 HP complete.
Mohola/Rev 10 ft. Dis. Spray Dryer, 129 \$/Hr., all 8/8.
Baker-Ferkhe & Readco db., arm mibrers 24xta350 gel., C/8, 8/8
Heal Exchanger 488 aq. ft., 304 8/8, 75/15 pel.
(2) Rietz petersker, UNUSCO Model PS-10, C/8, 20 HP
(4) Rietz estructor, URUSCO Model PS-10, C/8, 20 HP A-1 CHEMICAL EQUIPMENT CO. 59 EAST 21st STREET CHICAGO, IL 60616 (312) 842-2200

### NEW LIQUIDATION BAUXITE PLANT ... ARKANSAS LOCARES

NEW EQUIPMENT 4 x 40' Bertlett-Snow Rotary Klin
3 x 20' Bertlett-Snow Rotary Klin
3 x 20' Bertlett-Snow Rotary Dryar
3 x 20' Bertlett-Snow Rotary Dryar
M-400 (16") Bird Pusher Centriluge, 316556
18 ' Bird Horizontal Screen Bowl Centriluge, 316
12 x 16' Jeffrey Fluid Bed Dryar, 5/5

9.6" x 250' Trayfor Rotary Kins (8)
8.3" x 43' Trayfor Rotary Coolers (8)
6 x 40' Allis-Chalmers Hotary Coolers (8)
8 x 16' Trayfor Ball Mills, 450 H.P. (8)
Beit Conveyor-up to 54" wide, up to 500' lag.
10" x 24" Allis-Chalmers Jaw Crusher
Size 322 Allis-Chalmers Hydro-Core (grains)
Size 322 Allis-Chalmers Hydro-Core (grains)
Size 320' Chaltenooga Padde Mixer (2)
9 x 30' Chaltenooga Padde Mixer (2)
8 x 12' Chatanooga Padde Mixer (2)
Misc. Purfips, Compressors, Streening.
Collectors, Feeders and Conveyors (3)

Federal Equipmen 8200 Bessemer Avenu

### EQUIPMENT WANTED

GOOD, USED, CHEMICAL, EQUIPMENT - CENTRIFUGES. DRYERS, FILTERS, REACTORS

P.O. BOX 345 CMR Pt. Washington, PA IN Talex 5714936 VIDEX UW

FILTERS

SPARKLER 352 sq. ft. S/S Mod V-R-32

2.5'x 13' S/S Vacuum Belt Filter

SPARKLER 18-D-5 S/S Vert. Tank Press Lawley

2.5 x 13 5/3 vacuum men riner 18",24",36",42"P/F Presses C.I. Poly or 3/3 SPARKLER HRC 150, 200 S/3 Hortz. Press Leaf 35,50, 150,300 sq.ft. Press Leaf S/8

29,000 GAL. HORIZ. 316SS Tanks 40# (2)

1,200 QAL. T-316SS REACTOR 30 75/F HT. WALL

12000 Gal. Horiz SS w/Top Agt, DH. Hds. 12000 Gal. S/S Reactor 50#/50# 30 HP Agt

MISC. SPECIALS

30,50,150, 200, 1000 Gal. S/S Reactors 100#775

PFAUDLER 1500 gai. S/S Reactor MG 1000, 2000, GPH HOMOGENIZER 3000 M

65 HP MODULATIC Boiler 250 pai Gas Fired

6'6"x 78' Autoclave 150# w/track QOD

-FITZ Mills S/S D, D12, FAS012 & Chillagration

7'x(any length) AUTOCLAVES 100# Code W/lact -100-10,000 sq.ft. Ht./Exchr's S/S & C/S

SIMPSON 11/2F, S/S MIX MULLER

150 cu. ft. P/K Twin Shell stl. 10 KP

VIDEX WAREHOUSE SPECIAL

THEO WALTER 225 Gal. Heresite Lined S/S Reactor 100# F.V./Int.-40# jkt.

10 HP Vari - Drive Dbl. Mot. Agit.

WE HAVE MANY MORE ITEMS-LET US KNOW WHAT YOUNEED

-100-10,000 gal, G/L Tanks & Reactors Micro - Pulv. 1SH S/S 5HP W/Screw Feed

Tanks-20,000 Gal. C/S hortz w/Seddles (4)
Sparkler 18311 S/S press leaf filter jkt.
750 gal. S/S reactor/still
50 Gal. G/L reactor/still
31x4 Elimco R/L rot. vac. filter
537 sq. ft. Mikro dust collector
Niagara 24 sq. ft. Press. leaf filter S/S
200 gal SS vacuum receiver
M/G Homogenizer 250 M12-8 TBS (8000 PSI)
Patterson, Abbs 3,5 cu. ft. S/S dbl. cone vac dym
Stokes 73 sq. ft. S/S vac. shelf dryer

Stokes 73 sq. ft. S/S vac. shell dryer B/P 5, 15, 50, 150 GAL. STL. D/ARM MIXER.W.

CHEMICAL

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REPORTER

Quickest Way

to Keep Current

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**PURCHASED** 

200 Gel. S/S Reactor 150#/150# W/An

TANKS/REACTORS

CENTRIFUGES

SHARPLES AS-16,16V,26 S/S clar./sep. (Rebuilt)

DELAVAL MAPX-207 S/S OIL SEPARATOR

BAKER PERKINS HS-10W S/S "Lab" peeler

KRAUSE-MAFFEI 18.5" Pusher S/S (Rebuilt)

SHARPLES P-3400, 4000 \$5 horiz. solid bow

ALFA-LAVAL NX-214SS DECANTER 20 HP

BHARPLES 48"x30" T-1800 AUTO 316 SS (2)

SHARPLES Mark 3 14" SS perf. auto baskel

P/K 2, 10, 15, 75 cu.ft. 85 Twin Shell w/bar

120,135, 155, 175, 250, cu.ft. dbl rib 8/8

300 gal. J.H. Day Pony Mixer Steel w/can (2) Vrieco 100 cu.ft. S/S Nauta Mixers

LITTLRFORD 42 cu. ft. S/S jkt. w/choppers

Patterson 49 cu. ft. rot. vac. cyl. S/S 3'x 7' P/K5, 10, 370 cu.ft. SS liq-Sol. Processor

LOUISVILLE 8x45 SS Rot. Hot Air-Steam

SAVE

PLANT SITE

SPECIALS

**DRYERS** 

Bowen 4'8" No. 2 Tower Spray Dryer 5/5 QAS HOZZLE

Spray Dryer, Bowen 30" lab, Niro 48" utility S/S

36"x72" Bird horiz, solid bowl cent. stl. Stanstsel 8x50 Rot Hot Air Dryer w/Burner, C/S

Stansteel 8x50 Rot Hot Air Dryer w/Burner, C/S 50" Sweco 3/S 1-deck screen 2000 gal. Plaudler G/L reactor w/sglt. Bird 40x60 316 S/S Cent. 114:1 100 HP Felic. 6'x7' S/S Rot Vac filter 40"x 120" S/S Rotex Vib. Screen 2-deck 12,000 gal Frp Vert. Tanks (2) 1000 gal. Pfaulder G/L reactor 75#/75# w/sglt. Bird 18x28 S/S Contour Bowl Centrifuge P/S8' x 45' 88 CONVEYOR DRYER 22,500 Gal. Tank/Silo SS Vert 12 ft. x 24ft.

22,500 Gal. Tank/Silo SS Vert 12 ft. x 24ft.

RAYMOND

**PULVERIZING MILLS** 

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Tanks: 250-1400 Gst. storage & mixing, S/S & fiberglass 5008 Gst. 304 S/S storage tank, vertical, closed, dished hits. (2) Richmond 3000 Gst. S/S Reactors, 60/40 PSt. 50 HP 2-Spd. Richmond 3000 Gst. S/S Reactor, 60/40 PSt, 20 HP. (3) Pisudier 30 Gst. S/S Reactor, 60/90 PSt, 119 HP XP V/S. Harcules 500 Sg. Ft. "Roto-Jet" Filter, 316 S/S, 60 PSt. Jacobson 80SF-11 "Universal" Hammer Hill, 100 HP. (2) Entoleter Type ElM "Centrimi", 48" Dia., 316 S/S, 150 HP. Simpson "Rotex" model 851 Sifter, 316 S/S, aingle deck. Fitzmil, 316 S/S, No. DKASCI, 20 HP. Holo-Filte Screw Dryer, 18" Dia. x 20" L., C/S, Jkt. trough. Chrosslex 20 KW Hot Oil Unit. (LL XP) Sterling 12 KW Hot Oil Unit. (LL XP) Sterling 12 KW Hot Oil Unit. Hockmayer 50/25 HP High Speed Disperser 8/S, XP#2 Spd. (3) Susameyer model 8/S Sand Milla, 30 HP XP. Morehouse-Cowles 12-30 & 10-25 Sand Mills, 40 & 25 HP XP. Patterson Steel Bell Mills, 6"x6" 6 S'x5" and other sizes. Abbe 4/2x13" Continuous Steel Ball Mills, 50 HP. Reliable 4/2x13" Continuous Steel Ball Mills, 50 HP.

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BIRD 24x60 ST/CCF design WESTFALIA SAMR 5036 SS 15 HP

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Drum Dryers/Flakers (1) 24" dla. x 36" Bullovac SS dble. drun 1 diyer | ਗੁੜ੍ਹੇ 32" dia.x 108" Biaw Knox Ci dbie. drum dyer #132"de. x 17"6" Sandvík SS bell flaker #138"de.x 10" Buflovak Cl dble. drum dryer #134"de.x120"Blew Knox Cl dble. drum

dryer (1) 45 de.x 28" drum flaker, chrome plated arum |} 48"die.x 40" Cl flaker, mfg. by Buffalo (1) 48"dis.x 40 drum flaker, nickel plated drum, nig. Blaw-Knox

ieu Bee | 60 Kg. Aeromatic, Batch, 6'x9', 56,000 | 100 Kg. Aeromatic Model ST 100, sanitary Fügstrick Model FA 250, SS, 20 HP XP

(i) Western Precipitation Model P80SSO-A,
whiterew, 12" dia. x 20" long, SS constr.,
kki. rated 15 psi, complete with 7.5 HP
variesed drive.
(ii) New/Never-Used Joy Processor, CS, single
sciew, 16" x15" long, rated 110 psi @ 340°
f., sprocket & chain drive by 1.5 HP
satispeed drive. Rotary Vacuum

(1) 200 Cu. Pl. Stokes, SS constr., compit.
(2) 185 Cu. Ft. Přaudier, Double Cone, G/L, 30
4FY/50 psi jittů, 15 HP vari-drive
(1) 150 Cu. Ft. Stokes, Nickel
(1) 17 Cu. Ft. Slaw Knoz, SS
(1) 17 Cu. Ft. Blaw Knoz, SS
(1) 50 Cu. Pt. Titanjum Double Cone
(1) 50 Cu. Pt. Titanjum Double Cone
(1) 50 Cu. Pt. Titanjum Double Cone

Cone (1) 11.82, Pl. Horiz, Thin Film, vac, int. & 150 pig, 304/31689 (1) 17 Cu. Fl. Gamco, SS (1) 30 Cu. Fl. P-K Twin Shell, 30488 (1) 20 Cu. Fl. Abbe Twin Cone, 30488

| 133"3" Bown Laboratory w/3" cone bottom, \$3 conetr., w/centrifugal atomizer, 3 | 16 blows & motor.(1) | 115 libe bis 32" diax2" w/2" cone w/centrif. slottle \$5 contacts | 11 lif da. Bowen compit. system \$5 contacts, new 1976

### CENTRIFUGES

(1) Delaval BRPX S09, 68, 20HP (1) Unused Medel B-10 Podbletnisk, Alloy 20 (1) Sharpka A3-26, 85 (3) Sharpka A3-16P, 31688 (1) A49-Land S D Desarted (1) Sturpes AS-18P, 31688

(1) Alb-Laval S9 Decenter, Horiz., Mdl. NX314

(2) Dor Offer Mdl. CH30 CSU "Merco," 31688

contect, 150 HP

(1) Salar Pertine 8-32 "Pusher Type," SS, 50 HP

(1) Salar Pertine 8-32 "Pusher Type," SS, 50 HP

(1) Salar Pertine 8-32 "Pusher Type," SS, 50 HP

(1) Salar Pertine 8-32 "Pusher Type," SS, 50 HP

(1) Salar Pertine 8-32 NP

(3) Salar Pertine 8-32 NP

(3) Salar Pertine 8-32 NP

(4) (1) Salar Pertine 8-32 NP

(4) (2) Tolkural Capitriluge, Kynar Itnad, perf.

basket 48" x 24" pari, basket, 31686
witary, subo, plow & discharge, rated 85
//cu. k 6900 RPM, 20 HP XP.
basket, w/hydr. plow & 20 HP hydr. drive
psf. basket, w/hydr. plow & 20HP hydr. drive
fill follows 48" x 24" Batchmaster, rubber lined,
psf. basket, w/hydr. plow & 20HP hydr. drive
fill follows 48" x 24" Batchmaster, rubber lined,
psf. basket, w/hydr. plow & 20HP hydr. drive
fill follows 48" x 24" Batchmaster, Herosita
kydr. drive

II) Western states 48"x 24", 316 85
II) Retcher 48"x 28" Suspended type, 65 perf.
III Samily 20/10 Hp Starples Tornado 48" x 30", 31688, perf. Na Lavel Model MAPX 210 T24, 86 wetted

Description C-27, 316 SS, wetted parts, 40 HP Description C-20, Super-0-Hydrator, SS, 30 HP Blow Other Mercone Screener Model C-400 X2, at 53, brig screw disch., 10 HP

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Rotary Dryer, SS clad, 40 HP. 1-11'6" x 70' lg. Bartlett Snow Calciner, 316SS, 1100°C., com-

1-11'6" dla. C.E. Raymond Separator, single whizzer, CS constr. 1-24,000 Gal. Mix Tank, SS constr.,

16' dla, x 16', 20 HP. 1-20,000 Gal. Storage Tank, SS conetr., 16" dla. x 14',

2-10,000 Gal. Storage Tank w/ickt., SS constr., stmos. int., 150 pai jokt. 1-10,000 Gal. Mix Tank, SS constr.,

13' dla. x 10', 30HP. 1-10,000 Gal. Mix Tank w/int., colis, 13' dia. x 10', 30 HP. 1-Marley NC Tower, 88"W. x 14'6"

L. x 9 H. 1-1130 sq. ft. Micro-Pul Reverse Jet Dust Collector, CS constr. \*Large Quantity Silos. Many Screw Conveyors Available-various sizes, CS & SS construction.

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(1) 1.4 Sq. Pt. Luws Wiped Film, 31658, 1.5 HP
(1) 1.4 sq. Ft. Luws thin film SS
(1) 2.5 Sq. Ft. Rodney Hunt Turbo Film 347 SS
(1) 5.4 Sq. Ft. Luws filminuder, 316 L83
(1) 6.54 Sq. Ft. Votator Exsporator System, 316 SS contracts, 15 pai & FV & Int., 150 pai |kt.
(1) 8.7 Sq. Ft. Rodney Hunt Turbo-Film, 304 SS contract parts, 15 pai & FV/180 pai |ct.
(1) 10.8 Sq. Pt. Luws SS Wiped Film Evap. System, 16/850 pai
(1) 19.5 Sq. Ft. Votator Turba-Film, 304 Sanit. SS FV/160 pai
10/IP

(1) 20 Sq. Ft. Kontre Heriz. Adjust-O-Film, 316ELC, 50 psig, 15

(1) Approx 31 Sq. fl. Vert., Turbo-Film Processor, 304 SS Contacts (1) Like New 37.8 Sq. Ft. Luwe Hortz. Thin-Film Dryer, 304/316L

55 (1) 40 Sq. Ft. Kontro Adjust-O-Film, 89 constr., 20 HP (1) 47 Sq. Fl. Addison rising Film, Heat. "C" (1) Approx 51 sq. ft. Pfaudier Wiped film, 316 SS, 100/85 & FV (1) 80 Sq. Fl. Kontro Wiped Film Syst., SS constr., FV/150 psi,

(1) UNUSED 86 sq. ft. Luxa thin film dryer hartz, 316 L wetled parts, FV Int., 150 psi set steem (kt. (1) 141 Sq. Ft. Rodney Hunt Turbo-Film, 316 SS 15 pei int., 35 psi (kt 40 HP XP

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i, iktd. Obl. Rbr., CS
80 Cu. Ft. CS, 76HP
480 Cu. Ft. Marton Paddia, CS, 75 HP
J. H. Day bbl, Rbbon Carbon Shel Contr. 40 HP (1)
Ft. CS Dbl. Cone 30 HP
Ft. KS 316S8 Dbl. Cone
Ft. P.-K. Yim Shell, 316SS
Ft. J. H. Day bbl. Rbbon Carbon Steel Contr. 25 HP (2)
iu. Ft. CS Dbl. Cone, 7.6 HP
Ft. Marton Paddie, CS
d. Ft. 304 SS P-K. Twin Shell, w/int. bar
iu. Ft. Germon Steel Contr. 25 HP (2)
iu. Ft. Germon Steel Contr. 25 HP
L. Ft. Marton Paddie, CS
d. Ft. 304 SS P-K. Twin Shell, w/int. bar
iu. Ft. Germon Steel
Cu. Ft. Germon Steel
Cu. Ft. Germon Steel
Cu. Ft. Germon Steel
Cu. Ft. Germon Steel
S Cu. Ft. P-K, 304 SS, W/ilig. bar.
i Cu. Ft. P-K. Twin shell, SS
S Cu. Ft. WC Marton SS
i Cu. Ft. WC Marton SS
i Cu. Ft. Germon dbl. cone, CS, 11/HP
10 Cu. Ft. Germon dbl. cone, CS, 11/HP
10 Cu. Ft. Howes, CS, Dbl. Rbn.
6 Cu. Ft. SS, Dbl. Cone W/iliquid-colide bar
10" F-K zlig zeg

### **FILTERS**

Pressure Leaf

1-400 Sq. Ft. R/L Sparkler 1-327 Sq. Ft., 304SS, Ind. Filter, 11 leaves 1-320 Sq. Ft. Durco 316 SS, 11 Leaves 1-259 Sq. Ft. Pronto Mdl. #3259, 75 psig 1-200 Sq. Ft., SS, Hercules, Horiz.

316SS 1-150 Sq. Ft. Horlz., 12 Vert. Leaf 316SS

horiz, tank vert leaves 50 psi 1-Sparkler Mdl.#18 D 12, SS const. 1-Sparkler Mdl.#18 D 4, constr.

**Rotary Vacuum** 1-56.5 Sq. Ft. KS, Inconet 600 1-56.5 Sq. Ft. K-S, 316SS, flexibelt disch. 1-87.92 Sq. Ft. Feinc, SS wetted parts,

spring disch., 56" dia. x 6' face drum 1-132 Sq. Ft. Dorr Oliver, 304SS, maxibelt 1-200 Sq. Ft. Elmco, 316SS, 8'x8' 4-250 Sq. Ft. D.O. 316L SS Precoat, 6"

x10', sanit 1-250 Sq. Ft. K-S 316SS, coll disch. 1-300 Sq. Ft. Elmco, 316SS wetted parts, precoat type w/knife disch., 10" dia, x aux. equipment

1-314 Sq. Ft, Elmco, precoat disch., 316SS 1-400 Sq. Ft. Elmco, CS, Precost 1-500 Sq. Ft. Elmco, 318SS, belt disch. 1-3'x1' 316SS, knife diach.

1-3'x1' Dorr Oliver, FRP w/receiver & Nash H4 vsc. pump, 10 HP 1-3'x 1' K-S comp. sys., 316 SS Flex-belt disch

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(1) Mdr. #DASO-6 Fitzmill w/16 HP motor, on stend. (1) Mdr. #D-6 Fitzmill w/15 HP main motor & 2 HP on stend. (1) Mdl. #2DH Micro-Pulverizer, 88, w/40 HP main motor & % HP screw (1) Mdl. #371H Micro-Pulverizer, 88, w/40 HP main motor & % HP screw

motors. (1) Micro-Pulsair 88 Reverse Jet Dust Collector, Model #84-8-8-20. (1) 8" x 42" Votator Scrapped Surface Heat Exchanger, w/5 HP motor &

(1) 8" x 42" Votator Scrapped Surface Heat Exchanger, w/5 HP motor & ckt.

(1) 48" Swaco Single Deck Screen w/cover, BS constr., 1 HP

(1) 32" w. x 8" ig. Write Vibrating Conveyor, 88, w'cover, 2-deck.

(1) 2'x8' Write SS Fluid Bed Dryer w/perf. plate.

(1) 2'x8' Write SS Fluid Bed Dryer w/perf. plate.

(1) 32" W. x 13" Bandvick Belt Plaker, 85, b' cooling section.

(1) Sicker Freeze Dryer System, compit. w/prebresker, micro-vac. & York chiler.

(1) Reliz Disintergrator, 30 HP, Model SRP12-K122.

(2) Jonee Dewestring Presses.

(1) 1500 Gel. SS Mix Tenks, senitary fittings.

(2) 1500 Gel. SS Mix Tenks, senitary fittings. 3' HP Lightnin.

(2) 2000 Gel. SS Mix Tenks, senitary fittings, 3 HP Lightnin.

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(5) 1000 Gel. SS Jickto, Mix Tenks, senitary fittings, 3 HP Lightnin.

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(1) Podbielniak mdl. #9700-2
Cant. #30 PSI
(1) 5,000 gsl. CS, Vertical Sphere, finited 1007 PSI
(2) 12'k' dia x307'k' Long Packed Col. 30488, 275 design prec.
(1) 64 sq.ft. U-Tube Heat Exchanger, all 31688 75/450 psi
(1) 65 sq.ft. Heat Exchanger, all 31688 75/450 psi
(1) 85 sq.ft. Heat Exchanger, CS/8575/450 psi
(1) 90 sq.ft. Heat Exchanger, CS/8575/75 psi
(1) 650 sq.ft. Heat Exchanger, CS/8575/75 psi
(1) 1005 sq.ft. Heat Exchanger, CS/8575/75 psi
(1) 1401 sq.ft. Rebotted CS/8575/75 psi
(1) 1401 sq.ft. Rebotted CS/8575/75 psi
(2) 550 sq.ft. Heat Exchanger, CS/8575/75 psi
(3) 550 sq.ft. Heat Exchanger, CS/8575 psi
(3) 550 sq.ft. Heat Exchanger, CS/8575 psi
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1-135 Sq. Ft. Ni, Bowser, Vert. 1-35 Sq. Ft. Hercules Model 5, 316 SS,

#### 1-Sparkler Mdl.#33S 28, constr.

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psi, FV int. colls
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FV int., 50 psi jkt.
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1,500 Gal. 304SS, 100/30 psi
1,000 Gal. 304SS, 250/80 psi
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80 Gal. Hockmeyer Pony, 88 contacts, 7.5 HP varispeed
100 Gal., SS, Sigma Biede, Joktd. 40 HP
200 gal. W.P.CS dble arm Sigma biade, 20 HP
250 gal. AMK Kneader Extruder, Sigma Biades, CS construc, 40 patg, trough jkt.
500 liter Welex hi intensity, SS contact parts
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Unused 1000 Gal. Sanitary 31888 8-K Dbl. Motion Change Can; 1008FV/165 PSI, 125HP Littleford Model FKM-600D, SS Littleford Model FKM-600D, SS Littleford Model FKM-600D, SS Littleford Model FKM-600D, SS W/choppers 7 Cu. Ft. 304SS Nauta Model MBX-70 10.6 Cu. Ft. Nauta D-105, CS Welding Eng. Model 2FV1V2S Twin screw Extruder, SS, Contacts, 150 pai Koehring mdi. 350, 40 HP NEW/NEVER USED 75/37.5 HP Nockmeyer Disperser

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- drives. (3)
   Sparkler mod. 18S11, T304 S/S
   Walter 750 gal. reactor, FV/100 lb., jkt. 40 lb., 30
- Walter 225 gal. reactor, FV/100 lb., jkt. 40 lb., 10
- Waltor 225 gal. reactor, FV/100 lb., jkt. 40 lb., 10 HP vari dual motion.
   Stokes mod. 280 F, 100 ton press.
   22435-Mieli Milker, 250 G. sigma, SyS, jkt., vac, 100 HP 22448-B.P. 100 gal. Sigma, S&S, kilt.
   22447-Dyna Mill mod. K0200, horiz. (2)
   22448-Plaudier 30 gal. G/L. reactor (2)
   22449-B.P. 100 gal. Sigma, syS
   22440-B.P. 200 gal. Sigma, tift.
   22441-Papponneler 600 gal. Liter Mixer/Coller
   22440-P.K. twin shall brender, 1 cu. it. 325 lbs/cu. ft.
   L/S atainless. w/drives 5 HP ber, ¾ HP main.
   22461-P.K. 1 cu. ft., S&S, 275 lb. density, 30 lb. jkt., vac., ¾ HP vari spoed main, 2 HP bar.
   22314-Sharples #16 Super Centrifuge S/S, 3 HP, cooling colls clarifier (22)
- cooling colls clarifier (22) 22351-Atlas Copco air compressor, 600 CFM @ 125
- psi. 125 HP. (5)
  22198-Goude Flaker, 4'x4' stainless steel.
  22199-Goude Flaker, 4'x4' stainless steel.
  22199-Goude Flaker, 4'x4' stainless steel.
  22344-Christian ribbon mixer, 36 cu. ft. steel jacket. 7.5 HP, unitized. 22342-Sheet extrusion line, Prodex 4.5", 24:1 L/D, 50 HP, sineet die, chit roll stack, Femoo shear. 22343-NRM Terret Winder, 48-46 w/2 adjusto speed

### motors, 1 HP 22346-Sheet Coater, 54" steam heated.

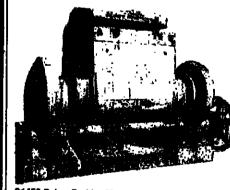
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MIXER/EXTRUDER 22352-Twin screw extruder (NA Bitruder Co), 66 mm, elect. heated, 20 HP DC pellett die, vac pump used 100 hours 17654-AMK 25 gal. Mixtinuder, Sigma, ST 7,6 HP. 1828-J.H. Day 25 gal. Dispersion, 25 HP vert main, 10 HP

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screw. 21334-Ross 40 gel., S/S hot all jkt., Sigma 6" disch. screw. 21334-Ross 40 gel., S/S hot oil jkt., Sigma 8 \*\* disch. screw.
19828-AMK 50 gal. ST, jkt., Sigma, 10 \*\* disch. screw.
19421-AMK 75 gal. ST, jkt., Sigma, 10 \*\* disch. screw.
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14832-AMK 150 gal., S/S, Sigma 15HP main, 10HP screw.
19494-AMK 150 gal., S/S Sigma, 50 HP main, 10HP screw.
20116-AMK 150 gal., ST, Sigma, 15 HP/10 HP
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503755-Littleford, FKM 6000, 3S jacketed, 25 HP. 20754-Littleford, FKM 30000 65 CF, 8/8, 4/4 jacket 19214-New Plaw Mixer, 80 cu. ft. 34788, jackot, 100HP. 20829-Littleford FKM 4200D, S/S, 67 cu. ii. JKT.

### MIXER RIBBON

21120 Ribbon Blender, S/S, 10 cu. ft., kt. 58, 150 psl. 20276-Road ribbon blender, 14.7 cu. ft. 304SS, 3 HP. 20616-Unused Day, 316SS, 23 cu. it., 5HP. 20189-Robinson, 25 cu. ft., S/S, Jackel, 10HP. 20985-Int 734 cu. ft. S/S dbl. robon, 5 HP. (4) 20212-Haas robon, 36 cu. ft., S/S, 15 HP. 19266-Ribbon Mix 80 cu. ft. T304 SS, 5 HP (4) 19566-Howe, 115 cu. ft., sanitary S/S, double spiral ribbor 20983-Strong Scottblender, 130 cu It., 3048S, 25 XP gear

21124-Riction Stender, 304SS Jkt., 160 cu. lt., 30 HP. 20614-Unused JH Day ribbon, S/S 270 cu. ft., 25 HP. 21114-JH Day ribbon blender, S/S clad, 75 HP. 480 cu.ft.

#### **FILTER PRESSES**

19846-Shriver P&F filter press, 12"x12" glum, plates closed delivory, 23 chambers. 20534-Sparry Filter Press, 30", alumn 20539-Sperry filter press 30", 35 Aluminum plates, 357 sq. 15370-Shriver 32" x 32", polypropylene, 27 plates, ratchet

closing. 15929-Shriver ALP, plate & frame, 18 36" x 36", S/S recessed plates. 19799-Clow/Bathlehem filter press, 36", recess plates, 25

chambers. 20076-Sperry filter press, 36", cast iron plates, closed deliv. 19462-independent litter press, 42" x 42", polypropylene, 4 eye closed, 34 chambers. 20550-Sperry filter press, 42" Encl closer, 41 alum. plates.

#### CANADIAN BUYERS LIQUIDATION-QUEBEC

22373-Reactor, 3500 gal. 8'x9'H, S/S clad. agit, dimple

jacket. 22381-Reactor, 5000 gal. 10'x92"H, T316S clad, internal 330 b., jkt 75 ib., agit 30 HP, vari speed. (2) 22379-Philadelphia, 7V63 agit drives, 10 HP, S/S (4) 22386-Siebtechnik H-400 centrifuge conturbex horz. screen, S/S, 20 HP.

22365-Climatrol water chiler LFV151172, 40 tons. 22385-Cyclone Sepeartor, 40" dia. x2 plus 6" cone, S/S, 22375-Sweco 30", 3 deck, S/S, ½ HP (2) 22387-Waukeshe mod. 300, Sanl pump, 8"x6", 15 HP.

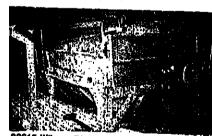
### FILTER-ROTARY VAC.

15828-FE,Inc. 36" dla.x12", S/S, string dlsc., 1/2 HP. 17477-FE, Inc., 3' dla.x 5', T316SS, bell disc., vac pump. 11177-Dorr Oliver S/S, 5' dla. x 6'L. 11653-Oliver T-316SS, precoat 5'3"x8'. 19431-K S. flexibelt, 6' dia. x 6' face, 316SS. 18392-Eimco beit füter, 8'x10', steel drum, w/Nash pumps. 15827-Ametek, 8' dia.x14'0' lace, maxi-belt, S/S. 17936-Eimco, 316SS, 10' dia. x 14', knile discharge. 17283-Imoco belt filter, 12 dia. x 12 , 3048S, Nash vacuum 20251-K.S. T304, vacuum filter, 12' dia x 14', 304SS. 20323-Dorr Oliver 11'8" x 16' face, S/S cont. parts. 11486-Eimco 10'x10'rotary vac. filter.

#### PRESSES

UNUSED Manesty Express, 10 ton, 20 stations, 11602-Colton Press mod 260, 31 die stations, 1800 TAB. 21382-FJ Stokes rotary tablet, 15 station, 10 ton. 21418-Manesty rotary tablet, 16 station, 10 ton. 14425-Stokes Tab Press mod.#551, 51 station, 4 ton. 21417-FJ Stokes rotary, 27 station, 4 ton, double sided. 503881-Komerak Greaves, mdl. 75MSS briquetting press, 20.5" dia x 4.5" face.

20.5" the x 4.5" race.
13392-Fitzpatrick Chisonator, 50 HP, mdi. HA-50-30-210.
18802-Stokes single puchi press, 900-530-1 (74), 12 ton.
17224-Dorst compact, series TPA15, 20 tons. 10890-Slokes, mdl. R-4 press, 20 ton.



22215-Wilmes Bladder Press, S/S, 38" diz. x 9'9" long, horiz, 5 KP, unitized. (2)

#### **DUST COLLECTORS** 21125-Fabri-f.Jet [dl.SQ9-4B bin vent, 42 sq. ft.

1639B-Mikro dust colector, S/S, 63 sq. ft., pulse jet. 21153-EVO, bin vent, 72 sq. ft., S/S, 5 HP

20253-Unused EVO pulse jet collector, mdl. 848F009C, 90 21 192-JH Day mdi. RJ-18RJ36, 125 sq. ft., CS, 3 HP. 21222-Fabri-Jet, mdl. SQ16-80, 151 sq. ft. 20398-Pulse jet collector, "FlexKlean," mdl. 58CT24 AV II

w/175 sq. ft., cloth, C.S. 21286-Mikro dust collector, 285 sq. ft., S/S. 20256-Unused EVO Corp. pulse jet dust collector, mdl. 99BF030C, 350 sq. ft.

### SCREENS

20255-Unused EVO Corp. dust collector, shaker type, mdl. MS049C10, 575 eq. ft. 21203-Sprout Waldron silter, D10, 6 decks. 21150-Sprout Waldron, D10, 1 HP, 10 decks, S/S cont. 21167-Sprout Waldron, D10, 2HP, 10 decks, S/S cont.

### **UNUSED CENTRIFUGES**

21593-Sharples P5400 Sanitary Centrifuges w/200 HP motor, 25 HP backdrive, gearbox, 5" pitch conveyor, CIP, control panel (2) LATE MODEL

#### CENTRIFUGES

20827-Bird, 18"x24" steel, conical bowl. 20826-Bird, 24"x38" steel, con. bowl, gearbox. 20819-Bird, 24"x38", S/S, 15 degree, contour bowl. 20884-Bird 24"x60", Hiseries, steel w/motor. 20364-Bird 32" x 50", SS T316 contour, 75HP 12883-Bird 36" x96" contour, 10 deg., T317 ELC. 20137-Affa Leval, NX 418-B31-80, 316SS, gearbox 17308-Dorr Oliver, 304SS, Merco mdl. 16L, 30 HP. 13565-Sharples, mdl. P 600, gearbox, motor 19767-Unused Sharples, 3 phase, P3000, S/S, carbide 20407-Sharples P2000 316SS, 20 HP drive motor. 21359-Sharples P3000 w/gearbox. 20686-Sharples P3000, 52:1 gearbox, S/S casting. 21725-Sharples, P3400, S/S, gearbox & motor. 19249-Sharples, P5400, 316/317SS, 200 HP, gearbox.

#### CENT-BASKET VERT.

21408-Delaval 22"x16" perf. basket hyd. drive. 15815-Delaval Mark III, perf. basket, 40"x24", 316SS, 30 19448-Sharples Sludge-Pak, SP-5500, 40"x24" basket

#### **ROTARY VAC DRYER**



22210-Bertrams, S/S 6'dia. x 12' dished heads, half pipe coll jacket 200 psi, 20/13 HP, unitized.

#### FILTER PRESSES

19846-Shriver P&F filler press, 12"x12" alum. plates, closed delivery, 23 chambers. 20534-Sperry Filter Press, 30", alumn. 20539-Sperry filter press 30", 36 Aluminum plates, 357 sq. 15370-Shriver 32" x 32", polypropylene, 27 plates, ratchet

closing. 15929-Shriver ALP, plate & frame, 18 36" x 36", S/S recessed plates. 20076-Sperry filter press, 38", cast iron plates, closed deliv. 19462-independent filter press, 42" x 42", polypropyleno,

20550-Sperry filter press, 42" Encicloser, 41 alum plates.

### Special Sale

4 eye closed, 34 chambers.

MUST MOVE STAINLESS TANKS 12,000 GAL., T304SS, 12'Dia.x 14' high, flat bottom, open top (16) PRICE \$8000 ea. FOB PA #20655

### TANKS-S/S

22257-UNUSED Tank, 100 gal., T30489, 30" dla., DH 22253-UNUSED Tank, 550 gal., T30485, 4' OD, DH. 22258-UNUSED Tank, 1200 gal., T30486, 5' dla. x7"H, DH. 21283-Tank, S/S vert., 1200 gal., 6' dia.x6', flat top & bot. 22255-UNUSED Tank, 1800 gal, 22264-UNUSED Tank, 3,000 gal., T30498, vac., 5'dla x 21'H, cob. 20651-Tank, 83, 9000 gal., agit., 12' dia. x 14'6" H.

20655-Tank, SS, 12000 gal., 12' dla. x 14', flat bottom, open top. 17043-Jos Oat horz. tank, 304SS, 16,000 gal., 12'6" dia. x 22'91/2" long, 10 PSI.

### REACTORS

20252-Unused Reactor, 600 gat., 3048S dimple jktd. 10138-Pfaudier, 800 gat., T-316 L. Ss. 55 PSI int/160 PSI. 20828-Brighton, 4000 gat., 8' dia. x 10', 316 ELC S/S 20458-Reactor, 4,000 gat., 316 S/S, 8' dia. x 7'9" et. side. 15475-Brighton, 4000 gal., 3169S, vacuum. 20287-GH Hicks, 4000 gal., 316 SS, pipe coti jkt. 20923-Richmind Eng. Reactor, 4800 gal., T316 stain/clad. Pfaudler 10,000 gal. reactors T3161, 100 pai int, 180 pai. Plaudier 15,000 gal, reactor T316L, 100 pat int., 200 pat jkt.

### **LIQUIDATION SALE**

### LARGE POLYSTYRENE **PLANT**

ILLINOIS LOCATION

21898-Pfaudier Reactor, 1,500 gal., 316L SS displat 21896-Pfaudier Reactor, 10,000 gal. 316L SS days HP. (4) 21900-Pfaudler Reactor, 15,000 gal. 316L SS dep

jkt. (3) 21897-Metal Arts Corp. vessel, 17,000 gal vet III. SS. (2) 21898-Brighton Corp. Tank, 12,000 gal. verl, sd.

21896-Brighton Corp. Tank, 12,000 gat. ven, so 316l. SS. (2) 21875-Bins, 176 cu. (t., S/S, cone bottom fist sp.(i) 21891-Bins, 450 cu. (t., C/S, epoxy lined. (8) 21904-Bins, 450 cu. (t., C/S, epoxy lined. (8) 21905-Bins, 500 cu. ft., C/S, epoxy lined, flattop, o cal bottom. (4)

21918-Worthington cent. pump, C/S, 15HP, 2000FM 44 psig (2) 21918-Union Pump-Inline, C/S, mod. 4x6x8.5 YX, 4

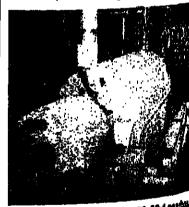
HP. (4) 21906-Edw Renneburg Rot. Dryer, \$/\$, steamhat HP. (4) 21881-Heaters, C/S steam, type BNF 2420 (8)

21914-Flotronics bin vent, filters, 122 sq. ft., 12bs; 21889-Ketron Feeder twin screw, 8/8 mod.5400-1300 21901-Sparkler filter, 352 sq. ft. C/S, mod. VR-32-92 21882-Screw conveyor, 304 SS, 7" dia. x 11L 15#. 21888-Strong Scott Rib Blender, 25 cu. ft., 5MP.(\$) 21920-Walex extruder 6", 30:1 L/D, 400 HP. 21870-Welex extruder 8", 30:1 L/D, 600 HP. 21876-Conair pelietizer, S/S, mod. 1024, 40 HP.(i)

21876-Conair peliektzer, SyS, mod. 1024, 40 m².(4)
21874-Water bath, SyS, portable. (4)
21887-Ross Static Mixer, 304SS, 3"x6 elemal.(4)
21917-Ingersol Rand pump, In-line pump, C/S, 30%.
21915-Goulds, C/S turbine pump, 200 HP. (2)
21913-Worthington cent. pump, S&S, 2 HP. (4)
21912-Union pump-inline, S/S, 7,5 HP (2)

21910-Tank, 840 gal., flet top & bottom. 21920-Modern Welding Tank, 4800 gal. horiz.nb 21878-Gorman Rupp pump, centrifugel C/S, mil 82EZ. (2) 21871-Prodex extruder 8", 30:1 L/D ratio, 600 lff.

21892-Buffalo blower, size 30, C/S, 10 HP (3) 21908-Buffalo exhaust fan, size 36, type B, 15 HP 21880-Sutor Bill Blower, C/S, 40 HP. (4) 21822-Buffalo blower, type 40-3CB, 40 HP. (4) 21894-Buffalo blower, mod. 45-3CB, 75 HP. (3) 21883-Bird, 32x 50 centrifuge, 80:1 ges/box. (



21883-Bird Centrifuge, 32x50, 80:1 gestin.

21895-Tank, 850 gal. vert. coal tar ex 21911-Tank, 54000 gal. vert. C/S epoxy contains

top/bot. 21903—Tank, 50,000 gal. vert. C/S epoxy, fiet bot of cal top.

psl. (2)
21879-Sweco sifter 60", mod. L. 86938, 2.5 HP.
21923-Kason sifter 60", mod. K69135, 5/5, TP.
21884-Flotronios Cyolone mod. FTHEC379 1, 34 S

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EAST COAST BUYERS!
61,000 gel. Tanks, T30488; 18'da,42'k stop & bot., Chemineer Agil., mod 7HIL-48, NHP, 27 RPM. (4)

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COMPRESSORS-1,240 CONTROL OF THE CON

FRIED SKID MNTD. (2)

220 CFM @ 215 PGF 150 Far (\*)

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EXCHANGERS-TTTANIUIVI

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3000 Gal. Hast G, 119 psi 2000 Gal. Titonium 135 paig COLUMNS

6'6"x35'6" Hast. G 40 psi

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A 150 cu. ft. SS 304 SS Twin Shell

20 cu.ll. 316SS, 6'6"x11'6", rotary

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13 or ft. SS & CS, 4'x14', 105/90/150 psi

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5,100 GAL, 350 PSI AGIT., 3,170 GAL, 350 PSI AGIT. (2)

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30,000 gal. 30489 fermentors, 14' x 24', 25 pai/vac., cotte, 200 HP agit. (4)
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4,100 gal. 30489 kettle, 16 pai jkt., 5 HP agit. (2)
2,500 gal. 30489 kettle, 20 pai jkt., 7½ HP agit. (2)
2,500 gal. 30489 reactor, 75 pai/rV int., 180 pai jkt
1,500 gal. 30489 reactor, 15 pai int., 25 pai jkt., 5 HP agit. (3)
1,150 gal. 30489 reactor, 16 pai int., 25 pai jkt., 5 HP agit. (9)
1,150 gal. 30489 reactor, 75 pai/rV int., 150 pai jkt., 5 HP agit. 900 gal. 304SS reactor, 75 pat/FV int., 150 pat jkt., agit. 600 gal. 304SS reactor, 300 pat int., 75 pat jkt., colls (3) 500 gal. 304SS reactor, 150 pat int., 150 pat jkt., 5 HP sg/ 300 gal. 31699 reactor, 76 par/FV int., 60 per likt. (50)... 31699 and 30499 reactors and kettles from gallon to 400 gallon... call for list.

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Bross macrinis (3) 15,000 gal. Plaudler, 316\$8, 12°6° x 16°, 100 psi, 200 psi jid. Agit. (4) 10,000 gal. Praudler, 31688, 11'6"x 12'4", 100 pai, 180 pai, jkt. Agit.

### M:ACTORS-GLASS

36 | Fig. 
750 gal. Praudier, 25 pal, 85 pal (kt., 5 TW agit. 1,000 gal. Praudier, 100 pal, 90 pal (kt. 1,000 gal. Praudier, 75 pal/vac., 90 pal (kt., 10 HP agit. 1,500 gal. Přeudier, 100 pel/vac., 90 pel jki., 1981, 1,500 gal. Přeudier, 100 pel/vac., 90 pel jki., 25 HP agit. 2,000 gal. Přeudier, 100 pel/vac., 90 pel jki., 15 HP agit. 2,500 gal. Přeudier, 150 pel, 90 pel jki., 47 W6 agit.

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Bird 32"x 50", centrifuges, 316SS, contour (2) Welex 8" Extruder, 700 HP, 30:1 L/D (5) Welex 6" Extruder, 400 HP, 30:1 L/D (2) Consir 24" pelletizer, 40 HP (2) Renneberg 5'x 25' 304 SS rot. not at

dryers, 10 HP, (3) Sweco & Kason 60" screens, S\$ (2) K-Tron 7000#/hr. twin screw volumetric

feeder, SS, (5) Pfaudier 1,500 gal. 316L SS reactor, FV/-180 psl' 5 HP agit. (2)

Pfaudisr 10,000 gal. 316L SS reactor, 150 psi/FV int., 180 psi jkt., hyd agit (4) Worth, Plant air comp., 323 CFM @ 125 psl. 75 HP, Model #4-BB-2 (2) 17,000 gal. & 12,000 gal. 316 SS Tenks (3)

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Blaw Knox 6'4"x 40' SS vac. dryar, 600 cu. ft. Blaw Knox 38"x 20" vac. drver 316L SS. 72 cu. ft. Blaw Knox 66"x 36" vac. dryer, nickel Malhis 24"x48" fisker, chrome plated Sandvik 48" x24" 85 belt flaker, UNUSED Sargent 60" x 45" 88 conveyor dryer Blaw Knox 32" x 90" dbl. drum Aeromatic #ST-5 fluid bed dryer, 5/10 KG Witte 36" x 10' fluid bed, 88, sanit.-cooler Renneberg 36" x 20" rolary dryer, 316 88 10" x 100" GATX rot. steam tube dryers, 140 psi (4) Wysamont #VTL-24 Turbo-tray dryer, 3048S P-K 5 cu. ft. vac. dryer, 304SS P-K 20 cu. ft. vsc. dryer, 304L 88 (2) Abbe 30 cu. ft. 30458 vec. dryer Devine 110 cu. ft. 304 SS vac. dryer Plaudier 165 cu. ft. glass-steel vac. dryers (2) Abbe 325 cu. ft. 31655 vac. dryer Devine 370 cu. ft. 31658 vac. dryer Davine 584 sq. ft. vac. shelf dryer Niro 30" SS spray dryer Bowen 72" apray dryer, SS Bowen 96" spray dryer, 89

FILTERS-VACUUM 36" x 1' Dorr-Otiver, fiber glass 9 sq. ft. 36" x 1' Ametek, 3 16 35, 9 sq. ft. 40" x 3' Bird-Young, SS, 48 sq. ft. 4' x 16' Elmco, 316 SS, 64 sq. ft., horiz. 4" x 16" Elmoo, 316SS, 64 sq. ft., horiz.
6" x 3" Ametek, SS, 55 sq. ft.
6" x 4" Elmoo, "Elmoomel" polypropylene, UNUSED
8" x 8" Elmoo, SS, 200 sq. ft., precoat
8" x 10" Dorr-Offver, 250 sq. ft., 316SS, precoat
8" x 12" Elmoo, 316SS, precoat, 300 sq. ft., (3)
8" x 14" Dorr-Offver, 316SS, precoat, 350 sq. ft. (2)
10" x 10" Elmoo, 316SS, precoat, 314 sq. ft.
11" x 16" Elmoo, SS contacts
12" x 14" Komiline, 304SS, 525 sq. ft., flexibelt disch. (2)

tin iversi-ting the second

54 sq. ft. Funda, SS, jitid. 65 sq. ft. Artisan "Dynamic" filter/washer, SS (2) 140 sq. ft. Niagara # 36-140 316 SS (2) 300 sq. ft. U.S. Autojet, 31685, Sanitary (2) 600 sq. ft. U.S. Autojet # 1600, 30488 36" Shriver filter press, 546 sq. ft., hydraulic 42" Shriver filter press, 777 sq. ft., hydraulic 48" Shriver ALP recessed filter press, 53, 276 sq. ft., 48" Poly Filter Co. polyprepylene filter press, 2094 sq. ft., 57 cu. ft. cake, 1983

PULVERNISHS

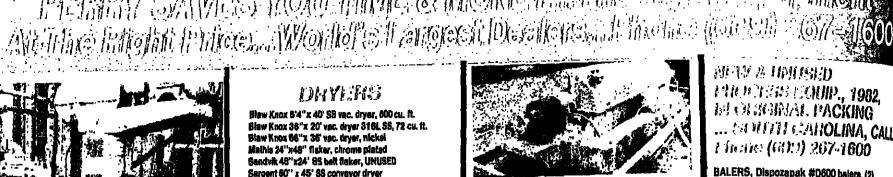
Mikro #47H putu., 125 HP, UNUSED (15)
Mikro #5MA atomizer, 5 HP
Mikro #6MA atomizer, 55
Paliman #REF8 putu., 100 HP
Paliman #PP6 putu., 50/76 HP
Abbe porcatain pebble mala., 36"x42", 36"x48",
42"x60", 48"x60", 60"x48" (7)
Raymond #6058 Hi-side roller mills, dbl. whzzer (2)
Raymond #73612 Hi-side roller mill, dbl. whzzer

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(4) 31689 packed columns; 18" x 15"; 20" x 12"; 38" x 23"; 38" x 40"
(1) 38" x 40" Billich 318L 88 column, 24 trays
(1) 48" die. x 60" high 38 tray column,
(1) 60" x 80" Billich 304L 85 column, 60 trays, FV/75 pai
(1) 72" x 39" high 38 column, 11 tray
(1) 78" die. x 43" high Nooter 68 column, jacketed, 25 pai/FV 150 pai jit., 20 trays
(5) Niegara Aero heat exchangers, 38 contacts
(21) Shell and tittle heat exchangers, 316 58 and 304 89: 12.41, 92, 213, 297, 300, 320, 393, 400 (2) 431, 460, 522, 524, 527, (4) 600, 1050, 1300 sq.t.
(2) Niegara #110 last filter, 58, 59 sq.ft.
(1) Niegara #110 last filter, 75 sq.ft., 88
(3) Mikro pulverizer #27H, 98

(1) Niegara #110 lest filter, 76 eq.ft., 98 (1) Mikro pulverizer #2/TH, 98 (2) Patterson 200 gal. 98 Sigma blade mixers, jktd., vsc. cover, bottom disch., 20 HP (1) Porter 82 cu.ft. 304 98 dbl. cone blender (1) 8000 gal. 3164 98 tents, 9° x 18°, horiz., cells (1) 8000 gal. 3164, 98 tents, 7° x 21°, 80 psi WP, cells (2) 4500 gal. 316 88 tents, 7° x 13°, agit. (1) 1800 gal. 3164 98 tents, 7° x 13°, horiz., w/cells (1) 1800 gal. 3164 98 tents, 5°6° x 8°, w/cells (8) 316 98 and 304 88 tents: 1200, 1100, 500 (2), 250, 200, 100 gal.

200, 100 gal. (6) 3000 gal, vert. steel tanks, 8' x 9' ) industrial filter dust unit dionization system, #3853PBA, Type 288, W/(2) 3161, 88 columns, 318 SS exchanger and lank, controls, elc... built 1979. .SO - SS pumps; (8) rubber-lined tanks on scales to 7600 get Rotoclone 88 collector; blower; etc.



Over (50) Bird & Sharples decanters

CENTRALIGES Sharples P-5400 D-Center, 316SS, Carbide tiles, late (2) Sharples P-5400 D-center, 316SS, tiles (2) Sharples P-5000 D-center, 316SS Sharples P-660 D-canter, 316SS, back drive

Bird 12" x 30", 3168S, Decanter, 20 HP Bird 18" x 28", 31698, Decanter (3) Bird 18" x 42" Decanter, steel, 10/30 Bird 24" x 38" Decanter, 30488, contour-10 Bird 24" x 38" Decenter, 31658, contour (3) Bird 24" x 80" December, steel Bird 24" x 86" December, 88, 125 HP

Bird 24" x 86" Decanter, SS, 125 HP
Bird 24"x 96" decanter, 30488, carbide tiles, 1981
UNUSED (3)
Bird 32" x 50" Decanter, Monel, contour (2)
Bird 32" x 50" Decanter, 30488, contour
DeLaval NX214-31B Decanter, 30488, 20 HP (2)
Sharples AS16V "Super," SS (5)
Sharples AS16V "Super," SS
DeLaval BRPX-213-30, 316SS separator/decludgers (3)
Westfalls SAMN 18037, Decludger/Separator, 316SS
Westfalls SA14-35-076 3-way separator, 316SS
Krupp 10" pusher, 316SS, 15 HP
Refer-Perking 10" pusher, 3048S, 40 HP

Sharples 48" T-1600 auto-basket, 100 HP Tolhurst 48" Batchmaster, rubber lined, 30 HP Sharples 48" Tornado-Matic, SS, 25 HP Delaval 48" Mark 111, 31688 hyd. CENTRIFUGE PARTS... Sharples, Bird, DeLaval, etc.

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2.4 sq. tt. Rodney-Hunt SS, 3 HP 21 sq. tt. Rodney-Hunt Turbsfilm #4, SS 87 sq. ft. Rodney-Hunt, 304 SS, Turbsfilm 100 sq. ft. Pfaudier, 316t. SS, wiped film 600 sq. ft. Gostin-Birmingham dbl. effect, 854 sq. ft. Buflovek dbl. effect, SS 1668 sq. ft. Roger dbl. effect, SS Swenson 3168S critinuous crystallizer, 9" x 14'

Polary and a transfer to the state of the

30,000 gal., 3049S, 14' x 24', colla, 200 HP agit. (4) 20,000 gal., 304SS, 12' x 24' (2) 17,000 gal., 304SS, 11' x 24' (3 17,000 gal., 316LSS, 14'x 13', Agit. (2) 12,000 gal., 316LSS, 12'x 14', Agit. (5) 10,500 gal., 316L SS, 8' x 25' 10,400 gal., 3045S, 10'6" x 16', agit. 8,000 gal., 304SS, 10'6" x 12' 5,000 gal., 304SS, 9'x9', 25 HP agit. 3,500 gal., 304SS, 8'x9' 3,000 gal., 304SS, 7'x 10', agit.

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3.6 cu. ft. Henschel #FM15D, 17/20 KW 11.5 cu. ft. Henschel #115JSS, 92/46 HP 13.7 cu. ft. Lodige #W600/K1200, mix/cool comb. 20 cu. ft. P-K twin shell SS 35 cu. ft. Day Nauta, #NBX350, SS 52 cu. ft. Nauta 304SS mixer (2) 60 cu. ft. Gemco , TW SH, Sanit, SS 69 cu. ft. Patterson dbl. cone, SS 70 cu. ft. Day Nauta, #NB700, 10 HP 75 cu. ft. Day Naute, SS, jktd. 75 cu. ft. Day Naute, SS, jktd. 98 cu. ft. Day Naute, SS, 1981 110 cu. ft. J.H. Day, dbl. ribbon, 21683 120 cu. ft. Cleveland ribbon blenders (5) 120 cu. ft. Gieveland ribbon bienders (b) 144 cu. ft. 304SS dbl. ribbon biender, 30 HP 169 cu. ft. Pfaudier, dbl. cone, glaas steel jktd., vacuum 200 cu. ft. Young, ribbon, SS 316 cu. ft. Sprout-Waldron ribbont blander, SS, lktv



(2) Sharples P3400 D-Canter, 316SS, Tiles back drive, little use since rebuilding!

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(2) Munson 300 cu.ft. blenders, 104"& #TS-300GB, pkgd. ) Munaon 110 cu.ft. blender, 90° d #700/110, pkgd.

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HILES 500-GAL 1304 \$/3 THEMITE AGIT. INTO. PRESSURE REACTOR-INT 50 P31/F7-IAT 50 P31
PFAUDLER 100-GAL 1316 \$/3 JKTO PRESSURE REACTOR-INT. 20
P31-IAT 40 P31
EKPERT-HARS 75-GAL 1316 \$/3 JKTO PRESSURE REACTOR-INT. 27
P51-IAT 40 P31
EKPERT-HARS 75-GAL 1316 \$/3 JKTO PRESSURE REACTOR-INT. 28
PFAUDLER 30-GAL 1316 \$/3 JKTO PRESSURE REACTOR-INT. 30
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CHEMICAL MARKETING REPORTER

CHEMICAL MARKETING REPORTER

November 17, 1986

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### **EQUIPMENT OFFERED**

Pliot Plant for sale --- Westfafia KA 25 ss centrifuge, JH Pilot Plant for sale — weattails NA 20 sc centriuge, un Day 54 cu. ft. Jacketed ribbon blender, Alsteele (Entoleter) 15 x 21 granufator, Derrick 3 screen dewatering vibrator, moyno pumps, as acrew conveyors, tanks, plue other process equipment. Loc. Mess (817) 682-6407.

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Continued from Page 61

TITANIUM DIOXIDE Rhone Poulenc 800 bgs (41,843 lbs) (Rouen) Le Havre, 10/16.
Sacco Pigments & Solvents 2,400 bgs (120,372 lbs)
(Sea Land Leader) Algedras, 10/14.
SCM 2,640 bgs (136,358 lbs) (Sea Land Develope)

eschaco 4,560 bgs (236,800 lbs) (Stuttgert Express)

NL Ind 48 pt (122,964 lbs) (Atlantic Compass) Gothen-Rhone Poulenc 2,400 bgs (125,530 bs) (Rouen) Le

Rione Poulenc 2,400 bgs (125,530 bg) (Houen) Le Havre, 10/16. 3,200 bgs (167,374 lbs) (Rouen) Rotterdam, 10/16. FOLU BALSAM Votaher Consolidation Servi 12 cm (0lbs) (Husum) Hamburg, 10/10. TOLUENE DI-ISOC YANATE Klockner Chemical 152 dms

TOLUENE DI-ISOCYANATE Klockner Chemical 152 dms
(91,482 bs) (Lircay) Valparaiso, 10/16.
TRICHLOROTRIFLUOROMETHANE 1 tnk (39,683 lbs)
(Rouen) Rotterdam, 10/16.
TRIETHYLENEDIAMINE Janel Int Fwdrs 100 dms (6.369 lbs) (Ming Moon) Kobe, 10/13.
TRIMETHYLPHENOL Stolt Tank Containers 1 tnk (35,516 lbs) (Ming Moon) Kobe, 10/13.
TRIPHENYL PHOSPHATE Monsento 1,280 bgs (73,545 lbs) (Alantic Compass) Livergool, 10/20. HENYL PHOSPHATE MODSONG 1,200 Egg (75,500 lbs) (Altantic Compass) Liverpool, 10/20.

SODIUM PHOSPHATE Rhone Poulenc 340 bgs (38,977 lbs) (Rouen) Le Havre, 10/16.

ULTRAMARINE PIGMENT Erco Shpg 18 pit (41,310 lbs)
(Husum) Rotterdam, 10/10.
VITAMINS Hermann Ludwig 25 dms (12,015 lbs) (Stuttgarl Express) Hamburg, 10/15.
WOOL GREASE Amerchol 106 dms (48,259 lbs) (Husum)
Rotterdam, 10/10.
Amerchol 80 dms (1,882 lbs) (Columbus Louisian) Melbourne, 10/10.
Garadon 80 dms (37,105 bs) (Columbus Louisian) Melbourne, 10/10.

CCHLORIDE Panalpha 1 bxs (60 lbs)(American Georgia) Bremerhaven, 10/12. ZINC PYRITHIONE 185 dms (44,057 lbs) (Westermarsch)

Bremen, 10/18.
ZINC SULFATE Panaipina 1 bxs (16 lbs) (American Geor-

gia) Eremernaven, 14/12. RCONIUM CARBONATE PASTE Magnesium Elektron 180 drie (41,667 lbs) (Wastermarsch) Felixatowe,

Amerchof 80 dms (1.692 lbs) (Columbus Louisien) Mel-bours, 10/10. Geradon 80 dms (37,105 lbs) (Columbus Louisian) Mel-bours, 10/10. ZINC CHLORIDE Panalpina 1 bxs (60 lbs) (American Geor-cint President and 10/12.

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ZIROONIUM CARBONATE PASTE Magnesium Elektron
180 dms (41,667 be) (Westermersch) Felixstowe,

product. Schering Corporation has exclud U.S. distribution rights.

are Nature's Blend Products, Inc., of Fare

ingdale, N.J., and Bernard Farber, its print

Schering and Farma Food are seeking bo

preliminary and permanent injunctions

torneys' fees and legal expenses.

On Oct. 9, Schering filed suit againstate

N.J., and earlier, on Aug. 26, againstic Laboratories, Inc., of Sun Valley, Calif. W

of the packaging graphics of Scheik

"Afrin" nasal decongestant spray,its "C"

Trimeton" allergy product, and its "

actin" athlete's foot remedy, as well as

protection of Schering's trademark "P

amine." These suits are still pending.

The chemical industry is again a

those industries having the safest works

in the United States, according to re-

submitted to the National Safety Court

the industry's standing is second only to

of the textile industry as published a

council's 1986 edition of Accident Fact

of occupational illness and injury loss

days away from work and deaths.

tile industry's 0.46.

turers Association.

for the transit industry.

**OBITUARY** 

Hans Stauffer

Rates are based on the number of incl.

The chemical industry reported 0.57 (ce

dence rate only slightly higher than the

Chemical workers are more than

Roland, president of the Chemical Mandi

Mr. Roland says the annual stat

Hans Stauffer, former president of Sta

served for one year as chairman of the tive committee and remained a direction 1971

Chemical Manufacturers Associations

The possibility of further phosphate bans, which now affect 25 percent of the

US detergent market, overshadows the business. Provided no further bank ensue, liquid encroachment should balance tripoly growth within the powdered detergent segment, resulting in relatively flat demand for the next several years

### **Generic Drugs Are Not Always Priced Lowest**

A survey of almost 900,000 prescriptions has found that generic drugs are not always cheaper than their brand name counterparts, even though pharmacies pay less for the generics.

In fact, says Bernard Bloom, an economist at the University of Pennsylvania, the survey determined that two common drugs - one used to treat menopause and the other high blood pressure - generally are more expensive in generic form.

Mr. Bloom said he could not explain the reason for the price difference but said the implications were clear. "My best advice to the consumer is just shop around," he said.

In Friday's edition of the Journal of the American Medical Association, Mr. Bloom said they examined 892,000 prescriptions written in 1984 for 21 brand name drugs and their generic equivalents at 1,400 pharmacies in 39 states

The researchers found that, on average, brand name drugs were slightly more expensive than generics, but there were notable

It says "Lasix," the brand name for a di- Chemical Firms Rank uretic prescribed for high blood pressure, was the same price or cheaper than its High in NSC Study generic equivalent two-thirds of the time. "Premarin," a brand named hormone pre-

scribed for menopausal symptoms, was as good or better a buy than generic estrogen in 80 percent of the cases examined.

The researchers also discovered wide price variations for all drugs and found "an important number of individual consumers" who pald more for a generic than they would have for the brand name.

"We were shocked by the results. I mean literally shocked," Mr. Bloom remarked. "I don't want to heap any abuse on either pharmacists or drug manufacturers, because I can't really be sure who's to blame. The consumer doesn't care why anyway. They just want to know which is the least expensive."

Twenty-five states require pharmacies to pass generic savings along to consumers, but only 19 insist the full savings be preserved. Bloom said he does not support more restrictive laws because the current ones already are impossible to enforce.

Overall, the price differences per pill were usually minor, involving no more than "a couple of bucks" for each precription, Mr. Bloom said. "But for the elderly," he noted, "a couple of bucks is a lot of money, especially if you're refilling your prescription every couple of weeks.'

### Schering Corp. Ordina (37,105 ba) (Columbus Louisian) Mel-Johns (37,105 ba) (Columbus Louisian) Mel-Suma (37,105 ba) (Columbus Louisian) Mel-

Schering Corporation, Farma Food A/S and associated companies have filed suit in the Federal District Court of New Jersey in Newark, charging a manufacturer and distributor of diet products with trademark infringement and unfair competition.

The complaint charges that the defendants are distributing a diet product bearing the trademark "Fiber Slim" that infringes the plaintiffs' "Fibre Trim" trademark. The complaint also charges that the label of the Fibre Slim product simulates the label and carton of the "Fibre Trim" product.

Farma Food owns the registered trademark "Fibre Trim" and manufactures the structures the structure of the complaint of the compla plaintiffs' "Fibre Trim" trademark. The

### PERFUMES & FLAVORS

Continued on Page 51

ing of the dollar on international markets."

### AROMA CHEMICALS

TERPINEOL - Import levels of terpinolandits ester, terpinyl acetate, have fallen gamatically in the past year. January brough August, 1986 totals reached 176,376 pounds, only 36 percent of the total for the same period last year: 489,523 pounds. The The defendants named in the civil active been attributed to the decline in the Nature's Blend Products, Inc., of Fairs milability of Chinese terpineol.

The lack of Chinese imports has made the

kmetic suppliers' position far more favoraka"says a US supplier of terpineol. He adds that both the terpineol and terpinyl acetate hibiting the defendants from continued weln great demand: "The market is tighter supply diet products under the trademant are salt and prices are climbing."
"Fiber Slim" or any other trademant code.

Pricing for terpineol had remained con-

ingly similar to Farma Food's trateaut sant for over two years when a price in-"Fibre Trim," or from otherwise compty mass, reflecting the limited availability of unfairly with the plaintiffs. The compty the perfumery grade chemical, of almost 40 also seeks treble damages, the records percent was recorded in late September. Terdefendants' profits from the sale of the pincol is now listed at \$1.45 to \$1.50 per kilo. product complained of, and an awards: ostandfreight New York, up from \$1.05 per torneys' fees and legal expenses.

### ican Pharmaceutical Co., Inc., of Passi,

BALSAMS — Balsam peru and balsam copaiba firmed in the last two weeks as the K Laboratories, Inc. (formerly knownship market experienced delayed Central Ameri-Laboratories, Inc.), of Skokie, Ill.; Catification and Jewett Drug Co. (Inc.) of Aberdeen, Signature and S er pound; balsam copaiba shipping prices strengthened 20c. per pound to \$1.75 f.o.b.

"Investories are very limited," says an essential oils broker, citing a steady demand and unsurely about the upcoming shipments. "Stipments have been interrupted," concurs mimporter, "to a large extent by the earthquite in San Salvador." He emphasizes that there is no shortage of material at point of origin, rather an inability to transport what

Sources speculate that prices for the balsam peru and balsam copaiba will continue firm while shortages continue: "Until shipmails resume, prices will remain higher be-Guse what little material is still in stock is icaght by many buyers."

BERGAMOT OIL - After a late Septembritiming trend when essential oils sources asicipaled a small Calabrian harvest, (CMR 9 22/86 p. 28) bergamot oil has begun to soften Reports of a strong and plentiful crop ctiped away at the high spot prices bringing rules down \$1 per pound. Shipping prices set affected also, coming down from \$45 at \$146 per kilo cost and freight New York to for each 100 full-time employees at 2

This is the bergamot oil's harvesting times safer on the job than the average industrial employee, according to Robert ane, saysone essential oils broker, "so peothe have a better idea how much material vill be on the market." An essential olis imone add that "the bergamot crop must Mr. Roland says the annual state of the bergamot crop must the shown the chemical industry to keep the substantial for the prices to safest industry in this country during lead top so quickly."

The essential oils broker emphasizes the Incidence rates for industries other industries other emphasizes the incidence rates for industries other industries other incidence rates for industries other industries of industries Saber's firming because it took that many t dollars to buy the Italian material."

subsequent softening, however, is not to a change in the currency market bethe lite is continuing to strengthen the dollar. Sources agree that the Caing must be due solely to reports of the

Hans Stauffer, former present his hope for Chemical Company, died at his hope for Chemical Company, his san frank is the Chinese are beginning to make Mr. Stauffer, a native of Osibote of the International bergamot oil many, joined his uncle, John Stauffer of the company, in San Frank founder of the company in San Frank founder of the com Aliva Indonesia, are building up faster beginning a 51-year care

concern.

He came East in 1926, when he was a lemand can relieve them. Spot prices
pointed Eastern sales manager. He per pound from \$9 to \$8.75. Shipping
in 1954. After retiring in 1967, Mr. Series and about 50c. on the kilo to \$18 to \$19

Projects must be accumulating the oil ritian buying can accommodate," says said oils broker. "Supply is simply in

sporter says that the recent devaluawite says that the recent develues indonesian ruplah has contributed cananga oil prices. Though

the devaluation didn't affect most of the exports, he adds, a material suffering from oversupply could have the devaluation "catch up" with it and help to depress the price further.

PAPRIKA - Spanish paprika and oleoresin of paprika spot prices have increased over the last month from 5c, to 7c. per pound for all grades. The primary reason for this is the amount of damage done to the Spanish crops by three steady weeks of rain. Sources quote from 10 to 15 percent of the crop was

destroyed by the loss of field drying crop in the period. Compound, the problem for US buyers is the weakness of the dollar on the international market. Spanish producers are holding the prices up in light of their quantitative losses and other currencies, such as the Japanese yen, can aford to pay the higher

Domestic producers of paprika and oleoresin of paprika are taking advantage of the current Spanish market and lowering their prices to attract disaffected buyers of the Spanish material.

A spice broker envisions continued tightness on the paprika market, noting a slowdown in Spanish processing that has accompanied the rain losses. "If they don't step up the rate of production, there may not be a surge of material available to US buyers."

### **COATINGS & PLASTICS**

Continued from Page 49

santo's new "Butycite" sheet and captive resin capacity came on line at its Springfield, Mass. plant this Summer, while Du Pont boosted its "Salfex" capacity by 20 million pounds, in two separate plant expansions, one completed in May, the other by the end of October.

With demand strong this year, supplies of resin and sheet have been very tight. Even though producers have been operating plants at full capacity, demand still exceeds capacity, they say.

Worldwide demand for PVB sheeting, three-quarters of the total market, is said to range between 150 million pounds and 200 million pounds per year. The market is growing, particularly in the automotive segment, as laminated safety windshields become the norm abroad. Next year, Japan will require all automobile windows to be laminated, a move which should boost demand, and possi-

bly US export levels. The US market for PVB is estimated to be around 96 million pounds; between 70 and 90 million pounds of this is sheet, the remainder resin for coatings applications. Within a framework of 4 percent per annum overall growth, the US automotive sheet demand is showing 2 percent growth; in contrast, architectural sheet is growing at 10 percent per

Exports currently stand at about 10 million pounds per year; producers feel this number may increase substantially over the next two years to meet heightened demand abroad

Coatings applications are myriad, producers explain, catering to individual, specialized customer needs; currently, the major areas of concentration are "wash primer" coatings, magnetic wire, marine and corrosion-resistant coatings, flow agents and photoimaging applications such as reproductive

Demand for reproductive dry toners, which use PVB as a binder and toughener, have been growing 15 percent per year for the past two years, and are expected to sustain this growth rate over the next few years.

Ceramic binder applications represent one new growth outlet for the resins, which are being used as "green strength" binders in ape casting construction of capacitors and other circuit components.

Prices for the resin, dependent on PVOH (polyvinyl alcohol) prices, were last increased in April and currently stand at \$2.80 per pound. PVB sheet prices have been stable for the past few years, producers relate, at 50c. per square foot for both architectural and automotive sheet grades; specialty sheet grades sell for as high as 80c, per square foot. Producers feel the recent expansions should ease current tightness, and enable

them to keep up with growing demand. POLYSTYRENE - Polyser Inc. has followed Huntsman Chemical Corporation and Dow Chemical Company in raising selling prices for its lines of polystyrene by Sc. per pound, although the firm has announced

later effective date of January 1. Huntsman and Dow announced similar increases, with a 2c.-per-pound increase for specialty and colored grades, to be effective

American Petrofina, a division of Cosden Oil and Chemical Company initiated this second round of polystyrene price increases in response to additional styrene monomer price hikes. Petrofina's increase, announced for November 1, will probably be delayed in response to market pressures, a spokesman announced previously.

### **PLASTICS ADDITIVES**

SILICATES — PQ Corporation will raise list and selling prices for its "Q-Cel" hollow silica microspheres by 3 percent effective January 5, the company announced last

New truckload prices for "Q-Cel" Grade 200 will be 4c. per pound higher, at \$1.44 per pound. Grade 300, also to rise 4c. per pound, will be listed at \$1.29 per pound.

The microsphere products are used in a wide range of applications including low density fillers for plastics composites and as sensitizers in explosives.

### Sandoz Spill

Continued from Page 9

causing problems similar to the ones in the Hudson River stripped bass fishery (because of PCB contamination).

In France, the authorities have already banned fishing for the next six months in the Rhine and its direct tributaries. Over on the German bank, North Rhine Westphalia area a water treatment plant is expected to be reopened shortly and drinking water is expected to be taken from the river in Dussel-

In Holland the situation is uncertain as the country gets two-thirds of its drinking water from the river. It was, according to press reports, unclear whether the Dulch would

seek compensation for the accident from the Swiss government or from Sandoz.

A spokesman for Sandoz, M. Fazel, was quoted as saying "It goes without saying that damages were caused by this fire. We are responsible, and there is not a shadow of a doubt that we will take care of it...We feel badly about it, and I would say that we are shocked and saddened by what has happened

### Sabic Planning N.Y. Sales Firm

Saudi Basic Industries Corporation, which is ten years old this year, is moving to "decentralize" its sales activities now mainly conducted out of the company's Riyadh headquarters.

Abdullah S. Nofaldi, president of Sabic Marketing, Ltd., the company's whollyowned global marketing subsidiary, told reporters attending the K-'86 plastics and rubber trade fair in Dusseldorf, West Germany, that the company will create new sales companies in London, the site of an existing Sabic office, and in New York. It had been expected that the company would set up its US sales base either in New York or in Hous-

He said the companies will, in effect, move key sales functions closer to existing and potential customers, as well as established distribution centers around the world.

Mr. Nojaidi notes that Sabic has completed its first-generation projects and is now concentrating on optimizing the efficiencies of existing plants, developing downstream projects, developing new grades of existing products and implementing plans for a research and development facility.

The company started production at a new downstream VCM/PVC plant recently and has introduced a new hexene-comonomer, high alpha-oletin formulation of polyethylene,

Sabic's affiliates now produce more than 20 distinct products in nearly 100 different grades, he says, and these are marketed to some 2,000 customers in 60 countries.

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8V. INC	Union Standard Equipment
y J.F. Chemicei Co., inc	
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nann-La Roche, inc	U.S. Industrial Chemical Co., Div. National
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CHEMICAL MARKETING REPORTER.

November 17, 1986

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November 17, 1986

### CHEMICAL PROFILE PLATFORM \*

### SODIUM TRIPOLY November 17, 1986

SUPPLY	
PRODUCER	CAPACITY
FMC, Carteret, N.J	85,00
FMC, Green River, Wyo	150,00
FMC, Lawrence, Kan	
FMC, Newark, Calif	120,00
Monsanto, Augusta, Ga	87,50
Monsanto, Carondelet, Mo	80,00
Monsanto, Long Beach, Calif	
Monsanto, Trenton, Mich	80,00
Occidental, Dallas, Tex	60,00
Occidental, Jeffersonvifie, Ind	60.00
Olin, Joliet, III	175.00
Stauffer, Chicago, Ill	25,00
Total	1,102,50

\*Tons per year of sodium tripolyphosphate. Capacities are somewhat variable depending on the density of the material produced; most facilities make other phosphates as well. FMC is expanding its Green River capacity to 250,000 tons per year by the end of 1987 and is reducing output at Carteret to mainly food grade STPP. Monsanto completed the closure of its 120,000-ton-per-year Kearney, N.J., plant in the third quarter of this year. Stauffer has 80,000 tons per year of capacity idle at Morrisville, Pa. Profile last published 4/1/84; this revision, 11/17/86.

1985: 610,000 tons: 1986: 610,000 tons; 1990: 595,000 tons.

Historical (1976-1985): Minus 1.5 percent per year; future: minus 1 to 0 percent per year through 1990.

Historical (1952-1986): High, technical, \$39.50 per cwt., bulk, f.o.b., freight equalized; low, \$6.50 per cwt., same basis. Current: \$37.50 per cwt., same

Home laundry detergent builder, 52 percent; industrial and institutional detergents, 21 percent; dishwashing detergents, 16 percent; food uses, 4 percent; miscellaneous, 2 percent; exports, 5 percent.

Renewed emphasis on powder detergent marketing this year is giving tripoly a push on supermarket shelves. Reformulation is boosting tripoly content in phosphate-containing detergents. Modernization and the closing of high cost plants is trimming production expenses for the industry.

Non-phosphate liquid laundry detergents continue to encroach upon STPP markets, although at a slower pace, and now command 30 percent of the home detergent business. Imported tripoly, accounting for about 5 percent of the market, has had an effect on pricing.

Continued on Page 71

### Anderson on insurance

The following is an excerpt from a speech on the liability crisis given by Union Carbide's Warren Anderson before the recent annual meeting of the National Association of Casualty & Surety Executives.

Although Union Carbide has been actively involved at both the state and federal level on the tort reform issue, this is my first time at bat on the subject in a public forum. But a lot of business speakers have preceded me, and someone said we could fill the mall at the Washington monument and still not get a

product liability reform bill out of Congress. And the reason is not hard to understand it's mainly that the plaintiff's bar, and the consumerist groups that oppose business on this and most other issues, could fill the mall.

Pennsylvania Avenue, and R.F.K. Stadium. That's the kind of risk calculus a lawmaker

Where do we go from here? As you know, there is some progress on the issue in the various states.

Some, like California, Washington, and Connecticut have moved boldly in an effort to curtail abuse of the system. Others, the experts say, have left loopholes big enough to make their reforms all but meaningless.

What the states do seem to agree on is a belief that a piecemeal approach to the problem will not succeed.

A policy statement adopted last month by the National Governors Association said in part, and I quote, that "the issue of product liability reform has increasingly pointed to federal action as a way in which to alleviate the problems faced by product manufacturers with regard to inconsistent state product

The statement goes on to say that "this lack of uniformity makes it impossible for insurers to predict accurately the potential liability of a product. Clearly," the governors say, "a national product code would greatly enhance the effectiveness of interstate com-

Hope springs eternal, and perhaps the next Congress will see fit to do the job its predecessors have neglected. If it does, what kind of system can we hope for?

I will leave the details to the legal scholars and experts, although I would nominate four reforms as crucial to increasing the predictability of the system:

I think any reform measure should deal with the question of joint and several liability. I see no rational reason for a defendant with only marginal involvement in an accident to be stuck with the whole judgment.

Municipalities in particular are up in arms over this, and with good cause. Second, awards for pain and suffering the non-economic damages — should be sub-

ject to some limit. Punitive damages should

also be limited — in amount and for cooks that is truly willful or reckless. As the stand now, a jury could award a plant \$5,000 or \$5 million without any rhype of reason for the difference.

Third, there ought to be a sensible color eral source rule. The rule says you can take that a plaintiff recovered expenses from other source, and that you can't deduct is payment from this recovery. But if a philate has already recovered his legitimate loss. why should the defendant have to provide him with a profit?

And fourth, manufacturers need a state the-art defense. Without one, a manufacture can be liable for a risk he could not be known about or anticipated when he in duced the product.

Some of the states have moved in line. rection, but we need the same rule in 194 that manufacturers and insurers can some confidence that they will not be the for something scientists may discuss vears from now.

Basically, we ought to work towards tem that can tell us either that sommer liable or he isn't. The system we have me can take the same evidence and reached conclusion, with any number of gradatio

Neither a business nor its insurerou reasonable operating or financial decir when liability is a wild card. Here's my own view of what

should mean: I think corporations should pay the vidual share of losses where they disso thing wrong that caused the loss.

I think that doing something wrongs imply that there was at least some a gence. It should mean failure to apply h edge in existence at the time a profo made, or at least some failure to meet tory requirements.

The return to a fault based standar liability was also at the top of the recommendations at the 1986 While I'm Conference on Small Business. It took page dence over other issues ranging from tion, to regulation, to international link

Finally, I think expert testimony she taken only from those people whose cations are well recognized by their part

These few rules would go a lo toward making the system clear, dill predictable, which would go a long a toward ending the lottery. But what will get in return?

get in return?
We would have a civil justice sydmic all of us can understand. And it might is one that commands our respect, and the commands our respect. not only the deep desire of American fairness, but our need for rationally system that so profoundly affects out omy and our future.

### JOBS & PEOPLE {{{{}}}} JOBS & PEOPLE **Grow Group Elects**

Manager and V-P

ager of distribution for Devoe Marine.

has joined Haarmann & Reimer Corporation

as account executive in the Aroma Chemi-

Grow Group Inc.



Suat R. Maconochie, who has been appo deputy regional manager in Europe for the R.P. Schere Corporation. Mr. Maconochie will betime regional president in Europe, Scherer's largest geographic operating unit, on April 1,

ROBERT S. HSU has been appointed senior research associate in the chemical research department of Hoechst-Roussel Pharmaceutical, Inc... CHARLES S. RIGBY has been elected national sales manager in the Specially Chemicals Division of Velsicol Chemical Corporation... KENNETH E. JONES has been named operations supervisor at the Andrews, S.C. production facility of M&T cals Division.

ROBERT L CRESPO has been appointed assistant treasurer of Witco Corporation... JOHNE AIKEN has been named sales agent for the Canadian provinces of Quebec and Ontario at Ferro Corporation's Bedford Chemical Division... WILLIAM J. LUDLUM



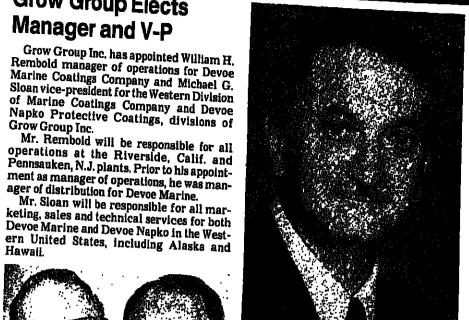
MULS INCORPORATED has named

The state of the s

enical Corporation, Akron, Ohio,

DONALD R. LEHMAN has been named director of business services and operations at the Portsmouth, Va.-based subsidiary of Celanese Corporation, Virginia Chemicals... FRANK A. TELESCA has been appointed to

R.L. Crespo



Joseph F. Ragusa, who has been appointed vice-president and regional menager of the Southeast and South Central regions for Thompson-Hayward Chemical Company. Mr. Ragusa will be responsible for all branch locations in the Southern half of the United States.

the newly-created position of venture manager for pool products at the Chemicals Group of Olin Corporation ... JOHN A. NIKLES has joined Crowley Company of New York as Midwest manager of sales and product development.

R. BARNES PARSONS has been named general manager and vice-president of health sciences marketing and JACK W. LOWE has been appointed director of international marketing at Eastman Company... SARAT CHANDRASEKHARAN has been named marketing manager for automotive adhesives at Ciba-Gelgy Corporation.

FRANK GIAMBRONE has been appointed



### **Air Products Names Two New Managers**

Air Products & Chemicals, Inc. has appointed Daniel M. Buck business manager of "Airopak" container systems and Kenneth J. Kallish sales manager for "Airopak" con-

Mr. Buck will manager Air Products' efforts to manufacture and market solventbarrier plastic containers and automotive fuel tanks.

Mr. Kallish will be responsible for organizing the sales of "Airopak" containers throughout North America.



eneral manager of La Prairie and ARNOLD PACITINGER has been elected senior vicepresident of sales both of Jacqueline Cochran, Inc... KEN RICHARDS has been



**BUSINESS BRIEFS** 

F.A. Telesca

named manager of specialty sales at Southern Talc Company.

JAMES E. HALL has been appointed naional sales manager for Lancy International, Inc... JAMES A. TICHICH has been named plant manager in Dallas for Ashland Chemical Company's Electronics and Laboratory Products Division.

### MEETINGS CALENDAR



November 17, 198 BUSINESS BRIEFS

#### THIS WEEK

CHEMICAL MANUFACTURERS ASSOCIATION, chemical industry conference, Palmer House Hotel, Novem-

DRUG, CHEMICAL & ALLIED TRADES ASSOCIATION, Fall luncheon, Walderf-Astoria, Hotel, New York,

EUROPEAN PETROCHEMICAL ASSOCIATION, Intermodal transport seminar, Frankfurt Sheraton Hotel, Frankfurt, West Germany, November 20-21.

FERTILIZER ROUND TABLE, Sheraton Inner Herbor Hotel, Baltimore, Md., November 17-19.

#### THIS MONTH

LATIN AMERICAN PETROCHEMICAL ASSOCIATION,

#### DECEMBER

CHEMICAL SPECIALTIES MANUFACTURERS ASSOCI-

NATIONAL ASSOCIATION OF CHEMICAL DISTRIBU-

### LATER ON

american institute of Chemical Engineers sixth annual meeting, Rio Palace Hotel, Rio do Janeiro, Brazil, November 23-25.

ATION, 73rd annual meeting, Marriott's Harbor Beach

TORS, 15th annual meeting, Ritz-Carlton-Naples Hotel, Naples, Fla., December 2-6.

SALES ASSOCIATION OF THE CHEMICAL INDUSTRY. annual Christmas party, New York Hitton Hotel, New York, December 18; education committee, seminar, "The Psychology of Seiling," Treadway Inn, Saddle

center for chemical process safety, international con-ference on chemical safety issues, Ornal Shoreham Hotel, Washington, D.C., February 3-5.

SSOCIATION OF OFFICIAL ANALYTICAL CHEMISTS, 12th annual Spring workshop and exhibition, Skyline Ottawa Hotel, Ottawa, Ontario, Canada, April 27-30.

CHEMICAL MARKETING RESEARCH ASSOCIATION, Houston Meeting; "The US Chemical Industry-Reponding to Change." Westin Galleria Hotel, Houston, CHINACHEM '87, international exhibition on chemical and

tion Center, Beijing, China, April 3-9. CHLORINE INSTITUTE, Winter meeting, Mayflower Hotel, Washington, D.C., March 15-19.

DRUG, CHEMICAL & ALLIED TRADES ASSOCIATION, 61et annual dinner, Waldorf-Astoria Hotel, New York,

FERTILIZER INSTITUTE, 1987 annual meeting, Marriott Orlando World Center, Orlando, Fla., February 1-3. INSTITUTE OF GAS TECHNOLOGY, 11th annual symposium on energy from biomass and wastes, Hotel Royal Plaza, Walt Disney World Village, Buena Vista.

INTER-SOCIETY COLOR COUNCIL, scientific confer-

85th annual meeting, Convention Center, Set nio, Tex., March 29-31; 12th International Center 
castable systems, Fairmont Hotel, I SOAP AND DETERGENT ASSOCIATION MA

SOCIETY OF THE PLASTICS INDUSTRY Cincinnati, Ohio, February 2.4.

THE FERTILIZER INSTITUTE 1867 Annuals
riott Oriendo World Center Oriendo
1-3, 1987.

CO PERFORMANCE Products, Inc. more into new quarters in Ridgefield, bulk commodities between the US and the this Friday (November 21). The organi-Province of Ontario. Operating authority for And was formerly Union Carbide Corporathe trucking company to carry bulk commodit egineering plastics group, headquar-sun babury, Conn. Amoco acquired the ities from and to points in Ontario comes Marier his year. The company's highafter more than a year of proceedings and king suitone, polyarylate, polyketone wide variety of end-use testimony from shippers and others carriers. Matlack is committed to a two-year business plan which includes operating a facility in

MEDIAN DIAGNOSTICS, Inc., Cincinnati Adversal Corporation, Akron, Ohlo, allorfor key peroxide and pentaery-inducts to the rubber industry in asiof the Rocky Mountains. Harwick Jesented Hercules in the Western statograf decade. Hercules Ohio, has finalized a licensing agreement with the University of Arizona which allows the company to produce the first test kit utilizing monoclonal antibodies to detect Cryptosporidiosis. The parasite, found occasionally in healthy individuals, is a serious complication in patients with acquired im-

Canada and hiring necessary sales, terminal

product of hair-thinning treatment developed by Crinos Industria Farmacobiologica. SpA, Como, Italy. The product, called "Foltene," has been markeled in Europe for over five years and grew out of Crinos' research on one of its major drug products, "Ateroid," for arteriosclerosis. Recent announcements of hair treatment products resulting from cardiovascular research clude Upjohn Company's "Rogaine" and Lederle Laboratories' "Viprostol."

NATIONAL SCIENCE Foundation says private industry spending for research and development is expected to grow approximately 5 percent during 1987 to nearly \$60 billion. This is down from the average annual growth rate of 13 percent during the previous ten-year period. Poor sales expectations in esse to transport liquid and drymeapolis, Minn., will distribute and market a. electrical equipment industry plans the says.

CHEMICAL M

largest average annual increase from 1985-1987 — 10 percent — followed by chemicals and aircraft at 6 percent each.

PETROLITE CORPORATION says it has a new patented water treating product called "Vector" VS-3060 that can provide effective dispersion as well as scale inhibition in both high-temperature process systems and conitional cooling water systems. Described as a unique organic liquid, Petrolite says the product's high thermal stability — up to 350 degrees Fahrenheit — permits full system protection even under upset conditions.

ROHM AND HAAS Company is offering a new eight-page brochure describing the company's "Paralold" impact modifiers and processing aids for polyvinyl chloride pack-aging applications. The lines contain prod-ucts specifically designed for production of complication in patients with acquired inmind deficiency syndrome (AIDS), resulting durable goods, concerns about short-term
mune deficiency syndrome (AIDS), resulting durable goods, concerns about short-term
in a life-threatening loss of fluids.

MINNETONKA CORPORATION, Mincited as reasons for the modest increase. The
profiles, All are FDA approved, the company

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NATIONAL PETROLEUM REFINERS

Meeting and industry Convention. Boca and Club, Boca Reton, Fig., January 29, 1987

conference of the reinforced plants and institute, Cincinnati Convention & Bullion

With the rubber industry by supplying substance, when needed, from its time.